OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	16.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	14.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2136
UTM Y COORDINATE (KM)	4787.3407
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	17
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	280

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.68E-02			
LEAD							
Benzene	71-43-2	TANKS 4.0		3.40E-04			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank 23 - Asphalt Cutback

STACK DESCRIPTION: Tank 23 - Vent

BUILDING DESCRIPTION: Tank 23

DATE INSTALLED: 1992 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Asphalt Cutback

TANK CAPACITY (GALLONS): 18,423 ANNUAL THROUGHPUT (GALLONS): 244,558*

***Note: Average annual throughput per tank for product storage group. Actual throughput may be higher for individual tanks in the storage group.**

TANK TYPE: 01 SOURCE: 05

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER: Mixed onsite from raw products, to tank by pipe

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES	
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS		NUMBER OF SAFETY RELIEF VALVES	1
				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00168%

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	16.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	14.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2118
UTM Y COORDINATE (KM)	4787.3351
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	17
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	280

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.68E-02			
LEAD							
Benzene	71-43-2	TANKS 4.0		3.40E-04			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank 26 - Asphalt Cutback or Additive

STACK DESCRIPTION: Tank 26 - Pressure Relief Valve

BUILDING DESCRIPTION: Tank 26

DATE INSTALLED: 1992 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Asphalt Cutback or Additive

TANK CAPACITY (GALLONS): 27,071 ANNUAL THROUGHPUT (GALLONS): 1,264,862*

***Note: Average annual throughput per tank for product storage group. Actual throughput may be higher for individual tanks in the storage group.**

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES	
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS		NUMBER OF SAFETY RELIEF VALVES	1
				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	Negligible

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	32.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2247
UTM Y COORDINATE (KM)	4787.3342
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	33
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	150

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		6.79E-02			
LEAD							
Benzene	71-43-2	TANKS 4.0		2.75E-04			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank 28 - Asphalt Cutback or Additive

STACK DESCRIPTION: Tank 28 - Pressure Relief Valve

BUILDING DESCRIPTION: Tank 28

DATE INSTALLED: 1992 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Asphalt Cutback or Additive

TANK CAPACITY (GALLONS): 27,071 ANNUAL THROUGHPUT (GALLONS): 1,264,862*

***Note: Average annual throughput per tank for product storage group. Actual throughput may be higher for individual tanks in the storage group.**

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES		NUMBER OF SAFETY RELIEF VALVES	1
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00080%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	32.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2266
UTM Y COORDINATE (KM)	4787.3333
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	33
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	150

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		6.79E-02			
LEAD							
Benzene	71-43-2	TANKS 4.0		2.75E-04			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank A - Fatty Acid Derived Amines

STACK DESCRIPTION: Tank A - Vent

BUILDING DESCRIPTION: Tank A

DATE INSTALLED: 1992 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Fatty Acid Derived Amines

TANK CAPACITY (GALLONS): 15,227 ANNUAL THROUGHPUT (GALLONS): 64,835

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	Negligible

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	18.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2237
UTM Y COORDINATE (KM)	4787.3074
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	19
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		5.23E-04			
LEAD							
Benzene	71-43-2	TANKS 4.0		ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Tank B - Ligninamine		
STACK DESCRIPTION	Tank B - Vent		
BUILDING DESCRIPTION	Tank B		
DATE INSTALLED	1992	DATE LAST MODIFIED	

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION	Ligninamine		
TANK CAPACITY (GALLONS)	15,227	ANNUAL THROUGHPUT (GALLONS)	51,296
TANK TYPE	01	SOURCE	03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT	Not a Degreasing Agent	TANK SURFACE AREA (SQ. FT)	NA
TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F)	NA	METHOD OF VAPOR RECOVERY	NA

Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES		NUMBER OF SAFETY RELIEF VALVES	1
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	Negligible

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	18.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2253
UTM Y COORDINATE (KM)	4787.3124
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	19
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		5.37E-03			
LEAD							
Benzene	71-43-2	TANKS 4.0		ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank G - Amines, Tall Oil, Hydrog. Adiponitrile

STACK DESCRIPTION: Tank G - Vent

BUILDING DESCRIPTION: Tank G

DATE INSTALLED: 1996 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Amines, Tall Oil, Hydrog. Adiponitrile

TANK CAPACITY (GALLONS): 15,227 ANNUAL THROUGHPUT (GALLONS): 62,151

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	Negligible

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	18.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2321
UTM Y COORDINATE (KM)	4787.306
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	19
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		6.85E-06			
LEAD							
Benzene	71-43-2	TANKS 4.0		ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank J - Amines, Tall Oil, Hydrog. Adiponitrile

STACK DESCRIPTION: Tank J - Vent

BUILDING DESCRIPTION: Tank J

DATE INSTALLED: Sep 1996 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Amines, Tall Oil, Hydrog. Adiponitrile

TANK CAPACITY (GALLONS): 15,227 ANNUAL THROUGHPUT (GALLONS): 62,151

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	Negligible

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	18.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	14.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2382
UTM Y COORDINATE (KM)	4787.3025
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	19
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		6.85E-06			
LEAD							
Benzene	71-43-2	TANKS 4.0		ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank K - Amines, Tall Oil, Hydrog. Adiponitrile

STACK DESCRIPTION: Tank K - Vent

BUILDING DESCRIPTION: Tank K

DATE INSTALLED: Sep 1996 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Amines, Tall Oil, Hydrog. Adiponitrile

TANK CAPACITY (GALLONS): 15,227 ANNUAL THROUGHPUT (GALLONS): 62,151

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	Negligible

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	18.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	14.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2397
UTM Y COORDINATE (KM)	4787.3076
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	19
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		6.85E-06			
LEAD							
Benzene	71-43-2	TANKS 4.0		ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank 3 - Lube Oil

STACK DESCRIPTION: Tank 3 - Vent

BUILDING DESCRIPTION: Tank 3

DATE INSTALLED: 1993 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Lube Oil

TANK CAPACITY (GALLONS): 27,071 ANNUAL THROUGHPUT (GALLONS): 142,857

TANK TYPE: 01 SOURCE: 02, 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00080%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	32.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.1551
UTM Y COORDINATE (KM)	4787.3273
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	33
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.63E-03			
LEAD							
Benzene	71-43-2	TANKS 4.0		1.26E-05			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Tank 12 - Cracked Heavy Oil Alkyl Amines
STACK DESCRIPTION	Tank 12 - Vent
BUILDING DESCRIPTION	Tank 12

DATE INSTALLED: 1994 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Cracked Heavy Oil Alkyl Amines

TANK CAPACITY (GALLONS): 7,051 ANNUAL THROUGHPUT (GALLONS): 19,755

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00068%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	10
MAR-MAY	30
JUN-AUG	40
SEP-NOV	20

OPERATING SCHEDULE

HOURS/DAY	24
DAY/WEEK	7
WEEKS/YEAR	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	12.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	10.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.1136
UTM Y COORDINATE (KM)	4787.3606
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	13
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.66E-04			
LEAD							
Benzene	71-43-2	TANKS 4.0		0.00E+00			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Tank 19 - Cracked Heavy Oil Alkyl Amines		
STACK DESCRIPTION	Tank 19 - Vent		
BUILDING DESCRIPTION	Tank 19		
DATE INSTALLED	1996	DATE LAST MODIFIED	

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION	Cracked Heavy Oil Alkyl Amines		
TANK CAPACITY (GALLONS)	11,374	ANNUAL THROUGHPUT (GALLONS)	19,755
TANK TYPE	01	SOURCE	03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT	Not a Degreasing Agent	TANK SURFACE AREA (SQ. FT)	NA
TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F)	NA	METHOD OF VAPOR RECOVERY	NA

Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES		NUMBER OF SAFETY RELIEF VALVES	1
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00068%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	16.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	11.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2365
UTM Y COORDINATE (KM)	4787.3363
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	17
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.84E-04			
LEAD							
Benzene	71-43-2	TANKS 4.0		0.00E+00			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Tank 20 - Cracked Heavy Oil Alkyl Amines		
STACK DESCRIPTION	Tank 20 - Vent		
BUILDING DESCRIPTION	Tank 20		
DATE INSTALLED	1992	DATE LAST MODIFIED	

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Cracked Heavy Oil Alkyl Amines

TANK CAPACITY (GALLONS): 13,536

ANNUAL THROUGHPUT (GALLONS): 19,755

TANK TYPE: 01

SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES	
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS		NUMBER OF SAFETY RELIEF VALVES	1
				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00068%

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	16.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2083
UTM Y COORDINATE (KM)	4787.3428
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	17
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.93E-04			
LEAD							
Benzene	71-43-2	TANKS 4.0		0.00E+00			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Tank 24 - Catalytic Cracked Oil		
STACK DESCRIPTION	Tank 24 - Pressure Relief Valve		
BUILDING DESCRIPTION	Tank 24		
DATE INSTALLED	1992	DATE LAST MODIFIED	

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION	Catalytic Cracked Oil		
TANK CAPACITY (GALLONS)	27,071	ANNUAL THROUGHPUT (GALLONS)	237,572
TANK TYPE	01	SOURCE	03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT	Not a Degreasing Agent	TANK SURFACE AREA (SQ. FT)	NA
TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F)	NA	METHOD OF VAPOR RECOVERY	NA

Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES	
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS		NUMBER OF SAFETY RELIEF VALVES	1
				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	Negligilbe

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	32.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2203
UTM Y COORDINATE (KM)	4787.3356
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	33
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	100

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.72E-03			
LEAD							
Benzene	71-43-2	TANKS 4.0		3.42E-06			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank 25 - #1 Fuel

STACK DESCRIPTION: Tank 25 - Pressure Relief Valve

BUILDING DESCRIPTION: Tank 25

DATE INSTALLED: 1992 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: #1 Fuel

TANK CAPACITY (GALLONS): 17,765 ANNUAL THROUGHPUT (GALLONS): 933,420

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00336%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	21.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2173
UTM Y COORDINATE (KM)	4787.3304
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	22
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	Ambient

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		8.97E-03			
LEAD							
Benzene	71-43-2	TANKS 4.0		1.03E-05			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Tank 27 - #1 Fuel
STACK DESCRIPTION	Tank 27 - Pressure Relief Valve
BUILDING DESCRIPTION	Tank 27

DATE INSTALLED: 1992 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: #1 Fuel

TANK CAPACITY (GALLONS): 17,765 ANNUAL THROUGHPUT (GALLONS): 933,420

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00336%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	21.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2219
UTM Y COORDINATE (KM)	4787.3291
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	22
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	Ambient

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		8.97E-03			
LEAD							
Benzene	71-43-2	TANKS 4.0		1.03E-05			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Tank 29 - Naphtha		
STACK DESCRIPTION	Tank 29 - Pressure Relief Valve		
BUILDING DESCRIPTION	Tank 29		
DATE INSTALLED	1992	DATE LAST MODIFIED	

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION	Naphtha & #1 Fuel		
TANK CAPACITY (GALLONS)	17,765	ANNUAL THROUGHPUT (GALLONS)	219,797
TANK TYPE	01	SOURCE	03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT	Not a Degreasing Agent	TANK SURFACE AREA (SQ. FT)	NA
TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F)	NA	METHOD OF VAPOR RECOVERY	NA

Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES	
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS		NUMBER OF SAFETY RELIEF VALVES	1
				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.10000%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	21.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	12.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.2260
UTM Y COORDINATE (KM)	4787.3275
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	22
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	Ambient

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		5.86E-02			
LEAD							
Benzene	71-43-2	TANKS 4.0		1.05E-04			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank 68 - Cracked Heavy Oil Alkyl Amines

STACK DESCRIPTION: Tank 68 - Vent

BUILDING DESCRIPTION: Tank 68

DATE INSTALLED: Oct 1999

DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Cracked Heavy Oil Alkyl Amines

TANK CAPACITY (GALLONS): 11,374

ANNUAL THROUGHPUT (GALLONS): 19,755

TANK TYPE: 01

SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE	Liquid	NUMBER OF PUMP SEALS		NUMBER OF IN-LINE VALVES		NUMBER OF SAFETY RELIEF VALVES	1
NUMBER OF OPEN-ENDED LINES		NUMBER OF SAMPLING CONNECTIONS				NUMBER OF SAMPLING CONNECTIONS	

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00068%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	16.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	11.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.276
UTM Y COORDINATE (KM)	4787.2678
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	17
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.84E-04			
LEAD							
Benzene	71-43-2	TANKS 4.0		0.00E+00			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 5: STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Tank 69 - Cracked Heavy Oil Alkyl Amines

STACK DESCRIPTION: Tank 69 - Vent

BUILDING DESCRIPTION: Tank 69

DATE INSTALLED: Oct 1999 DATE LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: Cracked Heavy Oil Alkyl Amines

TANK CAPACITY (GALLONS): 11,374 ANNUAL THROUGHPUT (GALLONS): 19,755

TANK TYPE: 01 SOURCE: 03

PLEASE CHOOSE FROM BELOW
(01) FIXED ROOF
(02) FLOATING ROOF (OR INTERNAL COVER)
(03) VARIABLE VAPOR SPACE
(04) PRESSURE TANK
(05) UNDERGROUND - SPLASH LOADING
(06) OTHER

PLEASE CHOOSE FROM BELOW
(01) PIPELINE
(02) RAIL CAR
(03) TANK TRUCK
(04) SHIP BARGE
(05) OTHER

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: Not a Degreasing Agent

TANK SURFACE AREA (SQ. FT): NA

TEMPERATURE OF DEGREASING AGENT IN TANK (DEG. F): NA

METHOD OF VAPOR RECOVERY: NA
Please choose from below:
(01) Incineration
(02) Refrigerated Liquid Scrubber
(03) Refrigerated Condenser
(04) Carbon Adsorption
(05) Vapor Return System
(06) No Recovery System
(07) Other

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE: Liquid

NUMBER OF PUMP SEALS:

NUMBER OF IN-LINE VALVES:

NUMBER OF SAFETY RELIEF VALVES: 1

NUMBER OF OPEN-ENDED LINES:

NUMBER OF SAMPLING CONNECTIONS:

NUMBER OF SAMPLING CONNECTIONS:

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
Benzene	71-43-2	0.00088%

SECTION 5, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	10	HOURS/DAY	24
MAR-MAY	30	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	20		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	16.00
BUILDING/AREA LENGTH (FT)	Cylindrical Tank
BUILDING/AREA WIDTH (FT)	11.00

STACK DATA

GROUND ELEVATION (FT)	4,504
UTM X COORDINATE (KM)	386.0947
UTM Y COORDINATE (KM)	4787.3377
STACK TYPE (SEE NOTE BELOW)	03
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	17
STACK EXIT DIAMETER (FT)	0.5
STACK EXIT GAS FLOWRATE (ACFM)	Negligible
STACK EXIT TEMPERATURE (DEG. F)	120

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC		TANKS 4.0		1.84E-04			
LEAD							
Benzene	71-43-2	TANKS 4.0		0.00E+00			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 6: LOADING RACKS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

PART A: LOADING RACK DATA

PROCESS CODE OR DESCRIPTION: Loading Rack #1 - Asphalt Cement Loading

STACK DESCRIPTION: Loading Rack #1

BUILDING DESCRIPTION: None

DATE INSTALLED: Mar-99

DATE MODIFIED: NA

TYPE OF LOADING: 01

Please choose from the following:
(01) Overhead loading - splash fill, normal service;
(02) Overhead loading - splash fill, balanced serviced;
(03) Overhead loading - submerged fill, normal service;
(04) Overhead loading - submerged fill, balanced service;
(05) Bottom loading - normal service;
(06) Bottom loading - balanced service

LOADING ARM VAPOR CLOSURE: 05

Please choose from the following:
(01) Incineration
(02) GREENWOOD
(03) SOCO
(04) CHICKSAN
(05) None - open to air
(06) Other

MATERIAL LOADED: Asphalt Cements

ANNUAL THROUGHPUT (GAL.): 22,187,146

REID VAPOR PRESSURE (PSI): ~0.0092 (true)

MAXIMUM MATERIAL TEMPERATURE (DEG. F): 330

AVERAGE MATERIAL TEMPERATURE (DEG. F): 330

SECTION 6, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	0	HOURS/DAY	24
MAR-MAY	25	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	35		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	NA
MINIMUM FLOW (ACFM)	0
PERCENT CAPTURE EFFICIENCY	0
BUILDING HEIGHT (FT)	NA
BUILDING/AREA LENGTH (FT)	NA
BUILDING/AREA WIDTH (FT)	NA

STACK DATA

GROUND ELEVATION (FT)	0
UTM X COORDINATE (KM)	386.0996
UTM Y COORDINATE (KM)	4787.3221
STACK TYPE (SEE NOTE BELOW)	05
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	10
STACK EXIT DIAMETER (FT)	0.01 *
STACK EXIT GAS FLOWRATE (ACFM)	0.001 *
STACK EXIT TEMPERATURE (DEG. F)	330

* Note: Stack exit diameter and flowrate set equal to 0.01 and 0.001 (respectively) for use as model parameters due to fugitive nature of emissions.

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)		PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM								
PM-10								
SO2								
CO								
NOX								
VOC		2.21E-05	(lb/gal)	0	5.60E-02			
LEAD								
Benzene	71-43-2	ND	(lb/gal)	0	ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 6: LOADING RACKS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

PART A: LOADING RACK DATA

PROCESS CODE OR DESCRIPTION: Loading Rack #2 - PMA Loading

STACK DESCRIPTION: Loading Rack #2

BUILDING DESCRIPTION: None

DATE INSTALLED: Mar-99

DATE MODIFIED: NA

TYPE OF LOADING: 01

Please choose from the following:
(01) Overhead loading - splash fill, normal service;
(02) Overhead loading - splash fill, balanced serviced;
(03) Overhead loading - submerged fill, normal service;
(04) Overhead loading - submerged fill, balanced service;
(05) Bottom loading - normal service;
(06) Bottom loading - balanced service

LOADING ARM VAPOR CLOSURE: 05

Please choose from the following:
(01) Incineration
(02) GREENWOOD
(03) SOCO
(04) CHICKSAN
(05) None - open to air
(06) Other

MATERIAL LOADED: PMA

ANNUAL THROUGHPUT (GAL.): 6,322,405

REID VAPOR PRESSURE (PSI): ~0.0092 (true)

MAXIMUM MATERIAL TEMPERATURE (DEG. F): 330

AVERAGE MATERIAL TEMPERATURE (DEG. F): 330

SECTION 6, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	0
MAR-MAY	25
JUN-AUG	40
SEP-NOV	35

OPERATING SCHEDULE

HOURS/DAY	24
DAY/WEEK	7
WEEKS/YEAR	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	NA
MINIMUM FLOW (ACFM)	0
PERCENT CAPTURE EFFICIENCY	0
BUILDING HEIGHT (FT)	NA
BUILDING/AREA LENGTH (FT)	NA
BUILDING/AREA WIDTH (FT)	NA

STACK DATA

GROUND ELEVATION (FT)	0
UTM X COORDINATE (KM)	386.0999
UTM Y COORDINATE (KM)	4787.3241
STACK TYPE (SEE NOTE BELOW)	05
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	10
STACK EXIT DIAMETER (FT)	0.01 *
STACK EXIT GAS FLOWRATE (ACFM)	0.001 *
STACK EXIT TEMPERATURE (DEG. F)	330

* Note: Stack exit diameter and flowrate set equal to 0.01 and 0.001 (respectively) for use as model parameters due to fugitive nature of emissions.

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)		PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM								
PM-10								
SO2								
CO								
NOX								
VOC		2.21E-02	(lb/gal)	0	1.60E+01			
LEAD								
Benzene	71-43-2	ND	(lb/gal)	0	ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 6: LOADING RACKS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

PART A: LOADING RACK DATA

PROCESS CODE OR DESCRIPTION: Loading Rack #3 - Cutback Loading

STACK DESCRIPTION: Loading Rack #3

BUILDING DESCRIPTION: None

DATE INSTALLED: 1993

DATE MODIFIED: NA

TYPE OF LOADING: 03

Please choose from the following:
(01) Overhead loading - splash fill, normal service;
(02) Overhead loading - splash fill, balanced serviced;
(03) Overhead loading - submerged fill, normal service;
(04) Overhead loading - submerged fill, balanced service;
(05) Bottom loading - normal service;
(06) Bottom loading - balanced service

LOADING ARM VAPOR CLOSURE: 05

Please choose from the following:
(01) Incineration
(02) GREENWOOD
(03) SOCO
(04) CHICKSAN
(05) None - open to air
(06) Other

MATERIAL LOADED: Cutback

ANNUAL THROUGHPUT (GAL.): 6,324,311

REID VAPOR PRESSURE (PSI): ~0.0092-1.5 (true)

MAXIMUM MATERIAL TEMPERATURE (DEG. F): 280

AVERAGE MATERIAL TEMPERATURE (DEG. F): 280

SECTION 6, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	0	HOURS/DAY	24
MAR-MAY	25	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	35		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	NA
MINIMUM FLOW (ACFM)	0
PERCENT CAPTURE EFFICIENCY	0
BUILDING HEIGHT (FT)	NA
BUILDING/AREA LENGTH (FT)	NA
BUILDING/AREA WIDTH (FT)	NA

STACK DATA

GROUND ELEVATION (FT)	0
UTM X COORDINATE (KM)	386.2087
UTM Y COORDINATE (KM)	4787.3514
STACK TYPE (SEE NOTE BELOW)	05
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	10
STACK EXIT DIAMETER (FT)	0.01 *
STACK EXIT GAS FLOWRATE (ACFM)	0.001 *
STACK EXIT TEMPERATURE (DEG. F)	280

* Note: Stack exit diameter and flowrate set equal to 0.01 and 0.001 (respectively) for use as model parameters due to fugitive nature of emissions.

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)		PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM								
PM-10								
SO2								
CO								
NOX								
VOC		4.81E-04	(lb/gal)	0	3.47E-01			
LEAD								
Benzene	71-43-2	3.93E-07	(lb/gal)	0	2.84E-04			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 6: LOADING RACKS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

PART A: LOADING RACK DATA

PROCESS CODE OR DESCRIPTION	Loading Rack #4 - PMA Loading
STACK DESCRIPTION	Loading Rack #4
BUILDING DESCRIPTION	None
DATE INSTALLED	1993
DATE MODIFIED	NA
TYPE OF LOADING	01
LOADING ARM VAPOR CLOSURE	05

Please choose from the following:
(01) Overhead loading - splash fill, normal service;
(02) Overhead loading - splash fill, balanced serviced;
(03) Overhead loading - submerged fill, normal service;
(04) Overhead loading - submerged fill, balanced service;
(05) Bottom loading - normal service;
(06) Bottom loading - balanced service

Please choose from the following:
(01) Incineration
(02) GREENWOOD
(03) SOCO
(04) CHICKSAN
(05) None - open to air
(06) Other

MATERIAL LOADED	PMA
ANNUAL THROUGHPUT (GAL.)	14,752,278
REID VAPOR PRESSURE (PSI)	~0.0092 (true)
MAXIMUM MATERIAL TEMPERATURE (DEG. F)	330
AVERAGE MATERIAL TEMPERATURE (DEG. F)	330

SECTION 6, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER		OPERATING SCHEDULE	
DEC-FEB	0	HOURS/DAY	24
MAR-MAY	25	DAY/WEEK	7
JUN-AUG	40	WEEKS/YEAR	52
SEP-NOV	35		

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	NA
MINIMUM FLOW (ACFM)	0
PERCENT CAPTURE EFFICIENCY	0
BUILDING HEIGHT (FT)	NA
BUILDING/AREA LENGTH (FT)	NA
BUILDING/AREA WIDTH (FT)	NA

STACK DATA

GROUND ELEVATION (FT)	0
UTM X COORDINATE (KM)	386.2096
UTM Y COORDINATE (KM)	4787.3538
STACK TYPE (SEE NOTE BELOW)	05
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	10
STACK EXIT DIAMETER (FT)	0.01 *
STACK EXIT GAS FLOWRATE (ACFM)	0.001 *
STACK EXIT TEMPERATURE (DEG. F)	330

* Note: Stack exit diameter and flowrate set equal to 0.01 and 0.001 (respectively) for use as model parameters due to fugitive nature of emissions.

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)		PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM								
PM-10								
SO2								
CO								
NOX								
VOC		2.20E-05	(lb/gal)	0	3.71E-02			
LEAD								
Benzene	71-43-2	ND	(lb/gal)	0	ND			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 6: LOADING RACKS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

PART A: LOADING RACK DATA

PROCESS CODE OR DESCRIPTION: Loading Rack #5 and #6 - Emulsions Loading

STACK DESCRIPTION: Loading Racks #5 and #6

BUILDING DESCRIPTION: None

DATE INSTALLED: May 2001

DATE MODIFIED: NA

TYPE OF LOADING: 03 (alternate is 05)

Please choose from the following:
(01) Overhead loading - splash fill, normal service;
(02) Overhead loading - splash fill, balanced serviced;
(03) Overhead loading - submerged fill, normal service;
(04) Overhead loading - submerged fill, balanced service;
(05) Bottom loading - normal service;
(06) Bottom loading - balanced service

LOADING ARM VAPOR CLOSURE: 05

Please choose from the following:
(01) Incineration
(02) GREENWOOD
(03) SOCO
(04) CHICKSAN
(05) None - open to air
(06) Other

MATERIAL LOADED: Emulsions

ANNUAL THROUGHPUT (GAL.): 20,182,466

REID VAPOR PRESSURE (PSI): ~0.0092 (true)

MAXIMUM MATERIAL TEMPERATURE (DEG. F): 200

AVERAGE MATERIAL TEMPERATURE (DEG. F): 200

SECTION 6, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	0
MAR-MAY	25
JUN-AUG	40
SEP-NOV	35

OPERATING SCHEDULE

HOURS/DAY	24
DAY/WEEK	7
WEEKS/YEAR	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	NA
MINIMUM FLOW (ACFM)	0
PERCENT CAPTURE EFFICIENCY	0
BUILDING HEIGHT (FT)	NA
BUILDING/AREA LENGTH (FT)	NA
BUILDING/AREA WIDTH (FT)	NA

STACK DATA

GROUND ELEVATION (FT)	0
UTM X COORDINATE (KM)	386.2026
UTM Y COORDINATE (KM)	4787.2810
STACK TYPE (SEE NOTE BELOW)	05
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	10
STACK EXIT DIAMETER (FT)	0.01 *
STACK EXIT GAS FLOWRATE (ACFM)	0.001 *
STACK EXIT TEMPERATURE (DEG. F)	200

* Note: Stack exit diameter and flowrate set equal to 0.01 and 0.001 (respectively) for use as model parameters due to fugitive nature of emissions.

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)		PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM								
PM-10								
SO2								
CO								
NOX								
VOC		7.36E-05	(lb/gal)	0	1.70E-01			
LEAD								
Benzene	71-43-2	6.13E-08	(lb/gal)	0	1.41E-04			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 6: LOADING RACKS

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

PART A: LOADING RACK DATA

PROCESS CODE OR DESCRIPTION: Loading Rack #8 - Emulsion Loading

STACK DESCRIPTION: Loading Rack #8

BUILDING DESCRIPTION: None

DATE INSTALLED: June 2001

DATE MODIFIED: NA

TYPE OF LOADING: 03

Please choose from the following:
(01) Overhead loading - splash fill, normal service;
(02) Overhead loading - splash fill, balanced serviced;
(03) Overhead loading - submerged fill, normal service;
(04) Overhead loading - submerged fill, balanced service;
(05) Bottom loading - normal service;
(06) Bottom loading - balanced service

LOADING ARM VAPOR CLOSURE: 05

Please choose from the following:
(01) Incineration
(02) GREENWOOD
(03) SOCO
(04) CHICKSAN
(05) None - open to air
(06) Other

MATERIAL LOADED: Emulsions

ANNUAL THROUGHPUT (GAL.): 8,649,628

REID VAPOR PRESSURE (PSI): ~0.0092 (true)

MAXIMUM MATERIAL TEMPERATURE (DEG. F): 200

AVERAGE MATERIAL TEMPERATURE (DEG. F): 200

SECTION 6, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	0
MAR-MAY	25
JUN-AUG	40
SEP-NOV	35

OPERATING SCHEDULE

HOURS/DAY	24
DAY/WEEK	7
WEEKS/YEAR	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	None	None
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N
HOOD TYPE (FROM APP. B)	NA
MINIMUM FLOW (ACFM)	0
PERCENT CAPTURE EFFICIENCY	0
BUILDING HEIGHT (FT)	NA
BUILDING/AREA LENGTH (FT)	NA
BUILDING/AREA WIDTH (FT)	NA

STACK DATA

GROUND ELEVATION (FT)	0
UTM X COORDINATE (KM)	
UTM Y COORDINATE (KM)	
STACK TYPE (SEE NOTE BELOW)	05
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	10
STACK EXIT DIAMETER (FT)	0.01 *
STACK EXIT GAS FLOWRATE (ACFM)	0.001 *
STACK EXIT TEMPERATURE (DEG. F)	200

* Note: Stack exit diameter and flowrate set equal to 0.01 and 0.001 (respectively) for use as model parameters due to fugitive nature of emissions.

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)		PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM								
PM-10								
SO2								
CO								
NOX								
VOC		7.36E-05	(lb/gal)	0	7.27E-02			
LEAD								
Benzene	71-43-2	6.13E-08	(lb/gal)	0	6.05E-05			

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 7: SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE - Not Applicable

DEQ USE ONLY

DEQ PLANT ID CODE | DEQ PROCESS CODE | DEQ STACK ID CODE

DEQ BUILDING CODE | PRIMARY SCC | SECONDARY SCC

DEQ SEGMENT CODE

PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION

STACK DESCRIPTION

BUILDING DESCRIPTION

DATE INSTALLED OR LAST MODIFIED | DATE LAST MODIFIED

MATERIAL DESCRIPTION

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)

NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)

NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)

UNIT OF MEASURE

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS | MATERIAL MOISTURE CONTENT (WEIGHT PERCENT) | MAXIMUM HOURLY WIND SPEED (MPH)

CONVEYORS ENCLOSED? (Y/N) | CONVEYORS IN BUILDINGS? (Y/N) | AVERAGE HOURLY WIND SPEED (MPH)

TRANSFERS ENCLOSED? (Y/N) | TRANSFERS IN BUILDINGS? (Y/N)

PNEUMATIC CONVEYOR TRANSFERS

MATERIAL MOISTURE CONTENT (WEIGHT PERCENT)

PRIMARY SEPARATOR TYPE | PRIMARY SEPARATOR PERCENT EFFICIENCY

SECONDARY SEPARATOR TYPE | SECONDARY SEPARATOR PERCENT EFFICIENCY

MATERIAL STORAGE DATA

PILE? (Y/N) | STORAGE CAPACITY | PILE LENGTH (FT.)

SILO? (Y/N) | STORAGE CAPACITY UNITS | PILE WIDTH (FT.)

OTHER STORAGE TYPE DESCRIPTION | PILE HEIGHT (FT.)

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT

SECTION 7, PART B - Not Applicable

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	
MAR-MAY	
JUN-AUG	
SEP-NOV	

OPERATING SCHEDULE

HOURS/DAY	
DAY/WEEK	
WEEKS/YEAR	

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE		
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATIO (FPM)		

VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	
BUILDING/AREA LENGTH (FT)	
BUILDING/AREA WIDTH (FT)	

STACK DATA

GROUND ELEVATION (FT)	
UTM X COORDINATE (KM)	
UTM Y COORDINATE (KM)	
STACK TYPE (SEE NOTE BELOW)	
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	
STACK EXIT DIAMETER (FT)	
STACK EXIT GAS FLOWRATE (ACFM)	
STACK EXIT TEMPERATURE (DEG. F)	

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10							
SO2							
CO							
NOX							
VOC							
LEAD							

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

SECTION 8: FUGITIVE ROAD DUST SOURCES

DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

PART A: GENERAL INFORMATION

ROAD DESCRIPTION: Product Haul Roads

PAVED? (Y/N): N

LENGTH (FT.): 2000 (average)

WIDTH (FT.): 12

BEGINNING COORDINATES		END COORDINATES	
UTM-X (KM)	UTM-Y (KM)	UTM-X (KM)	UTM-Y (KM)
386.0442	4787.3158	386.2573	4787.4277

DATA FOR ALL ROADS - PAVED AND UNPAVED

VEHICLE DESCRIPTION	NUMBER OF ROUNDTRIPS PER DAY	VEHICLE MILES TRAVELED PER DAY	NUMBER OF DAYS PER YEAR USED	AVERAGE VEHICLE SPEED (MPH)	SURFACE SILT CONTENT (% WEIGHT)
Tanker Truck	41.3	15	365	5	8.5

DATA: UNPAVED ROADS

VEHICLE DESCRIPTION	VEHICLE EMPTY WEIGHT (TONS)	VEHICLE FULL WEIGHT TONS	NUMBER OF WHEELS PER VEHICLE	NUMBER OF DAYS >0.01 INCHES PRECIPITATION
Tanker Truck	19	52.75	26	90

DATA: PAVED ROADS

NUMBER OF LANES	INDUSTRIAL AUGMENTATION FACTOR	DUST LOADING (LB/MILE)
NA	NA	NA

ROAD DUST CHEMICAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN ROAD DUST BY WEIGHT

SECTION 8, PART B

OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER	
DEC-FEB	10
MAR-MAY	25
JUN-AUG	40
SEP-NOV	25

OPERATING SCHEDULE	
HOURS/DAY	24
DAY/WEEK	7
WEEKS/YEAR	52

FUGITIVE DUST CONTROL DATA

PARAMETER	PRIMARY	SECONDARY
CONTROL DESCRIPTION		
CONTROL CODE (APPENDIX C)		
MINIMUM DAILY APPLICATIONS OF CONTROL		
MAXIMUM DAILY APPLICATIONS OF CONTROL		
AVERAGE ANNUAL APPLICATIONS OF CONTROL		
AMOUNT APPLIED (UNITS/APPLICATION)		
UNITS FOR APPLICATION AMOUNT		

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM-10		1.34		0.83			
LEAD							

NOTES: IN LBS/UNIT. USE UNITS OF VEHICLE MILES TRAVELED (VMT).

SECTION 3.0

PROCESS DESCRIPTION

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility

3.0 PROCESS DESCRIPTION

Process operations at IAS involve the storage, production and distribution (loading/unloading) of asphalt binders including the following:

- Asphalt cements;
- Polymer-modified asphalt cements;
- Asphalt cutbacks; and
- Asphalt emulsions.

Asphalt binder is the component of asphalt pavement that holds the aggregate together and provides a waterproof cover for the base. The demand for asphalt binders is highest from April to October (when the majority of roads and parking lots are paved), and lowest during the winter months. As a result of this seasonal variation, IAS functions primarily as a bulk-storage facility during the winter, with most of the production and distribution operations being performed during the warmer months.

Sections 3.1-3.4 of this document describe the process operations at IAS, with an emphasis on equipment that has the potential to emit regulated air pollutants to the atmosphere. Associated process flow diagrams are presented at the end of Section 3.

3.1 Asphalt Cement Storage and Loading/Unloading

Asphalt cement is the residue produced during the distillation of crude oils. The Blackfoot plant receives asphalt cement from regional refineries by railcar or tanker trucks. Since the asphalt cement is delivered in a semi-solid form, it must be heated with steam from boilers (CB500 and CB350) to approximately 300 °F before it can be unloaded. A portion of asphalt products delivered to the Blackfoot facility is transferred by tanker trucks to the IAS Nampa facility.

The asphalt cement is then pumped into one of 19 designated storage tanks (Tanks 4-10, 13-18, 35-38, 74, 75). These tanks are heated with steam during the warmer months to make the asphalt cement suitable for mixing and pumping. The tanks are not typically heated during the winter months, when the manufacture and distribution of asphalt cement products are minimal. However, Tanks 4 through 9 may be heated during the winter months to facilitate product transfer from Blackfoot to the Nampa facility. Volatile organic compounds (VOCs) and toxic air pollutants (TAPs) are emitted from the asphalt cement storage tanks due to changes in temperature, pressure and liquid-level. The tank vapors are vented directly to the atmosphere or to a biofilter (East Biofilter or West Biofilter). These biofilters are not considered to be emission control devices, they are used at the facility for purposes of odor control only.

In the final step of the process, asphalt cement is transferred out of the aforementioned storage tanks and into customer tanker trucks via overhead, splash loading (typically Loading Rack #1). VOCs and TAPs are emitted from the loading rack during this process.

3.2 Polymer-Modified Asphalt Cement Production, Storage and Loading

Polymer-Modified Asphalt Cement (PMA) is manufactured at the Blackfoot plant by mixing asphalt cement with polymer and lube oil. The PMA product is prepared/stored in seven tanks (Tanks 4-7, 9, 74, 75). The lube oil is stored in a dedicated tank (Tank 3). These tanks are heated during the warmer months by hot oil heaters (Primary Hot Oil Heater CEI-5000G and Secondary Hot Oil Heater CEI-3000) and are maintained at ambient temperatures during the winter months. Gases that volatilize from the stored lube oil and PMA contain VOCs and TAPs. These vapors are vented directly to the atmosphere or to the East and West Biofilters.

Loading racks (typically Loading Racks #2 and #4) are used to transfer PMA product from the storage tanks to customer tanker trucks. These racks are overhead, splash-fill systems that emit VOCs and TAPs.

3.3 Asphalt Cutback Production, Storage and Loading

Asphalt cutback is manufactured at the Blackfoot plant by mixing asphalt cement with fuel oil or catalytic cracked oil. Although, it is usually prepared in a customer's tanker truck, asphalt cutbacks can be made and stored in two designated tanks (Tanks 22 and 23). These tanks are heated with steam during the warmer months, but are kept at ambient temperatures during the winter when asphalt cutback is not typically stored onsite. The process additives are maintained in five storage tanks (Tanks 24-28) that are usually kept at ambient temperatures. Tanks 2, 26, and 28 can store either asphalt cutback additives or asphalt cutback product. Vapors containing VOCs and TAPs are generated during the storage of asphalt cutback and fuels. These vapors are vented directly to the atmosphere.

Asphalt cutback is transferred from the storage tanks into customer tanker trucks by an overhead, submerged-fill system (typically Loading Rack #3). VOCs and TAPs are emitted from the loading rack during this process.

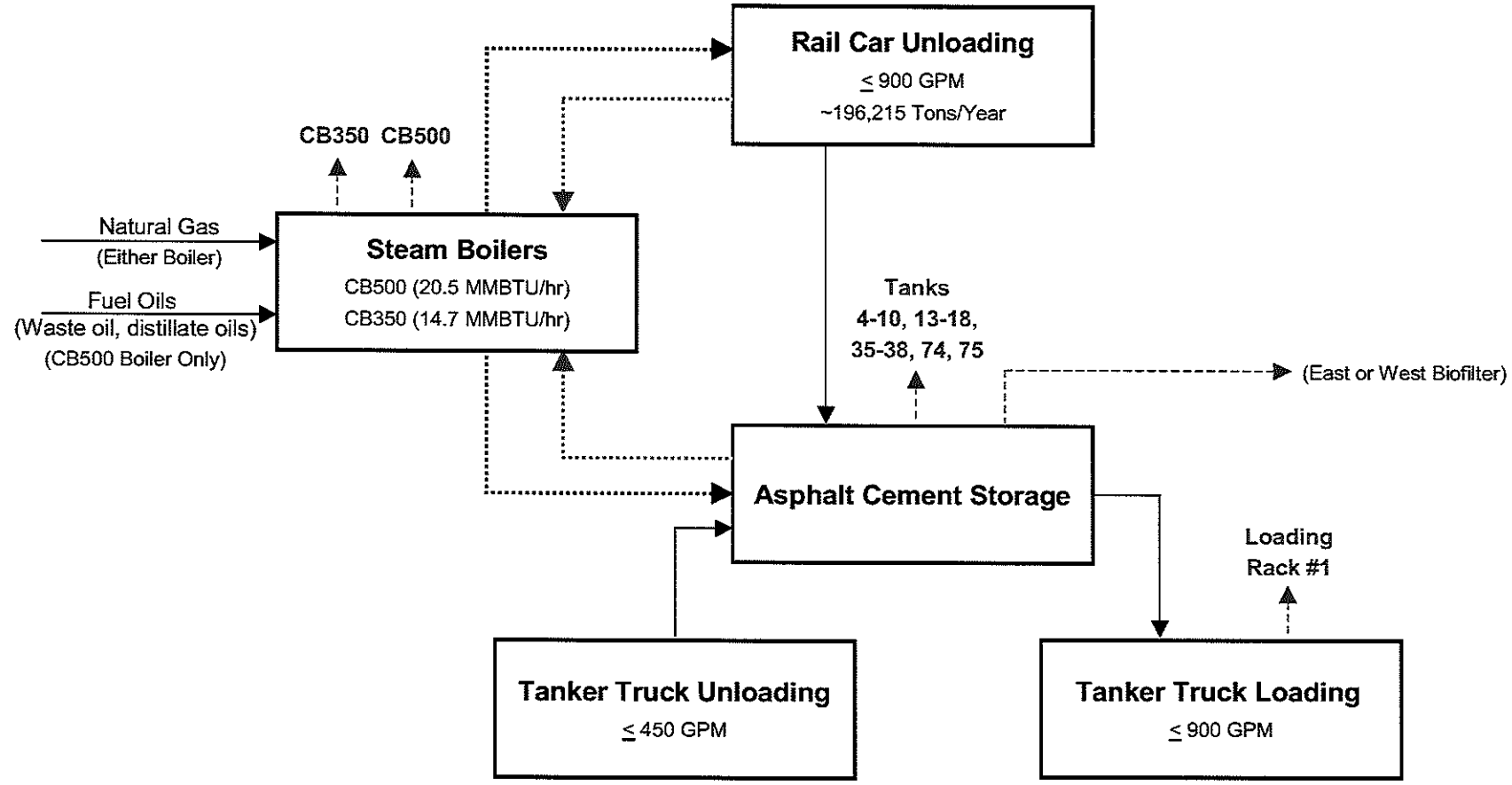
3.4 Asphalt Emulsion Production, Storage and Loading

The Blackfoot plant manufactures two types of asphalt emulsions: water-based and fuel based. Water-based emulsion is produced by combining asphalt cement with water and additives such as hydrochloric acid, latex, and emulsifiers. Fuel-based emulsion is prepared in a similar manner, but also involves the addition of petroleum distillates. The process may be performed in a tank or a customer tanker truck. The water-based emulsions are mixed/stored in ten tanks (Tanks 44-48 and 51-55) at the plant, while two tanks (Tanks 49 and 50) are typically dedicated to the preparation/storage of fuel-based emulsions. Tanks 49 and 50 can also store water-based emulsions if not needed for fuel-based emulsions. These tanks are heated during the warmer months with steam to promote mixing and pumping. Although it is not typical to have asphalt emulsions at the plant during the colder months, any emulsion product kept onsite during the winter is stored at ambient temperatures. The process additives are maintained in eight storage tanks (Tanks 25, 27, 29, A, B, J, K), several of which are heated. VOCs and TAPs are emitted from the asphalt emulsion tanks and the additive tanks. These emissions are released directly to the atmosphere.

A loading rack (typically Loading Racks #5, #6, or #8) is used to transfer asphalt emulsion from the product storage tanks to customer tanker trucks. The rack is an overhead, submerged-fill system that emits VOCs and TAPs. Although not the preferred loading method, emulsions are occasionally transferred into a tanker truck by bottom filling.

Process Flow Diagram for Asphalt Cement Storage and Loading/Unloading

Idaho Asphalt Supply, Inc. – Blackfoot Facility



NOTES:

(1) This process flow diagram depicts typical asphalt cement storage and loading/unloading operations.

(2) The Primary and Secondary Hot Oil Heaters may be used to heat Tanks 4, 5, 6, 7, 9, 74 & 75 instead of the boilers.

(3) To facilitate flexibility, the plant maintains multiple loading racks that can be used to load asphalt cement into tanker trucks.

KEY

Product, fuel, additive ———

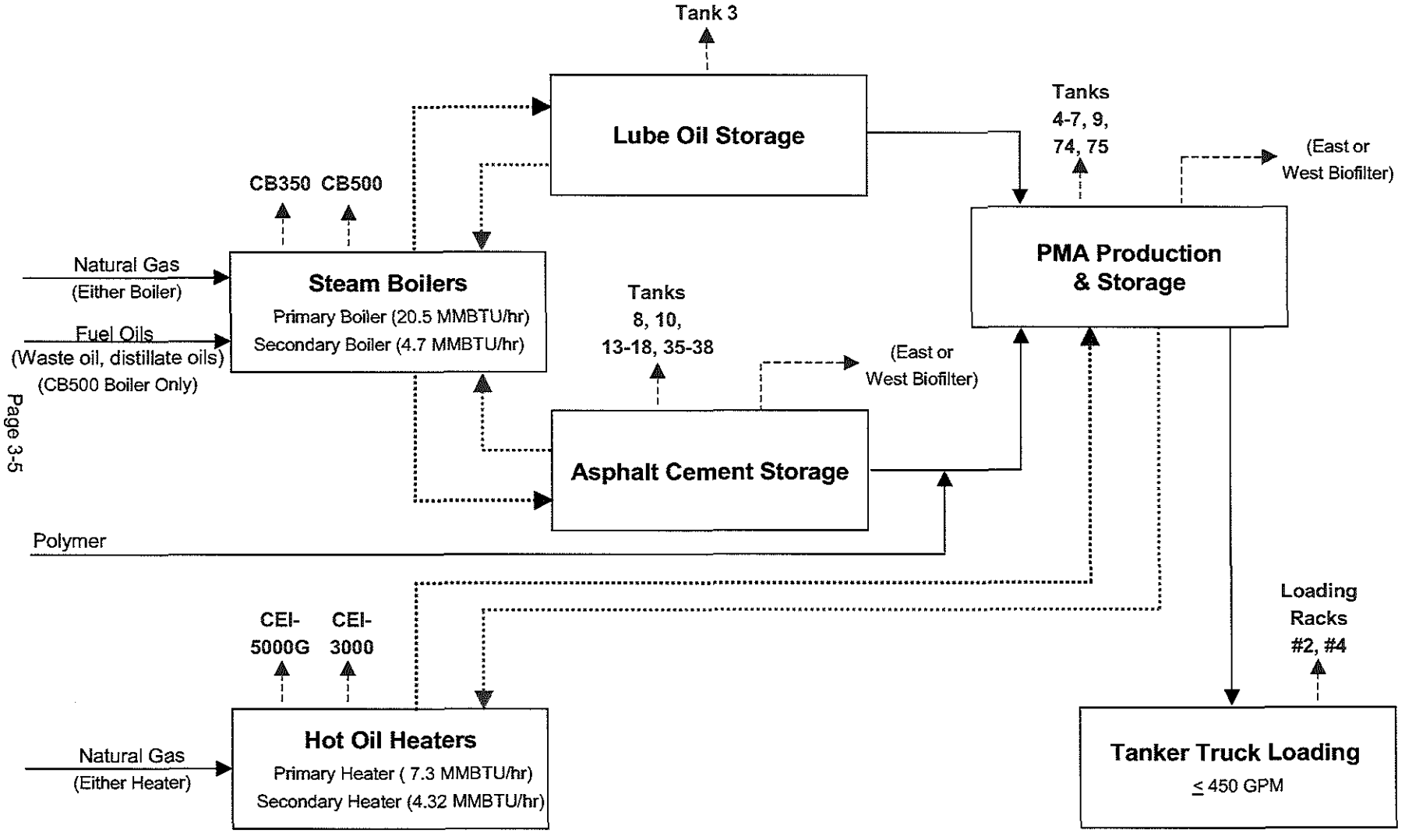
Heating Medium .....

Heating Return .....

Emission - - - - - -

Process Flow Diagram for PMA Production, Storage and Loading

Idaho Asphalt Supply, Inc. – Blackfoot Facility



NOTES:

(1) This process flow diagram depicts typical PMA production, storage and loading operations.

(2) Lube oil and polymer are added in varying amounts during PMA production, as required by formula.

(3) The Primary and Secondary Boilers may be used to heat Tanks 4, 5, 6, 9, 74 & 75 instead of the hot oil heaters.

(4) To facilitate flexibility, the plant maintains multiple loading racks that can be used to load PMA into tanker trucks.

KEY

Product, fuel, additive ———

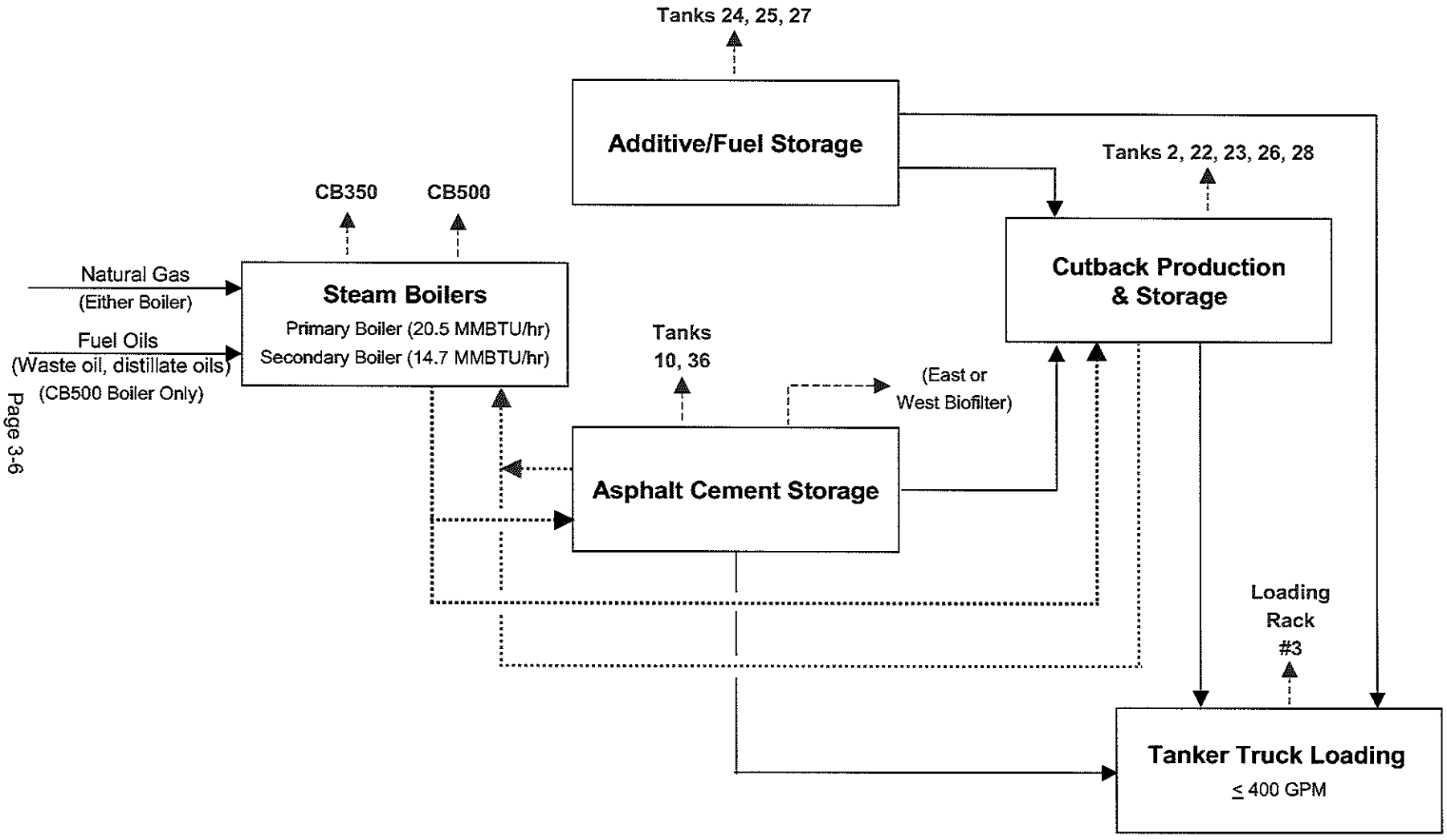
Heating Medium ·····

Heating Return ·····

Emission - - - - - -

Process Flow Diagram for Asphalt Cutback Production, Storage and Loading

Idaho Asphalt Supply, Inc. – Blackfoot Facility



NOTES:

(1) This process flow diagram depicts typical asphalt cutback production, storage and loading operations.

(2) Tanks 24, 26 & 28 may be heated via steam generated by the Primary and Secondary Boilers.

(3) To facilitate flexibility, the plant maintains multiple loading racks that can be used to load asphalt emulsions into tanker trucks.

KEY

Product, fuel, additive ———

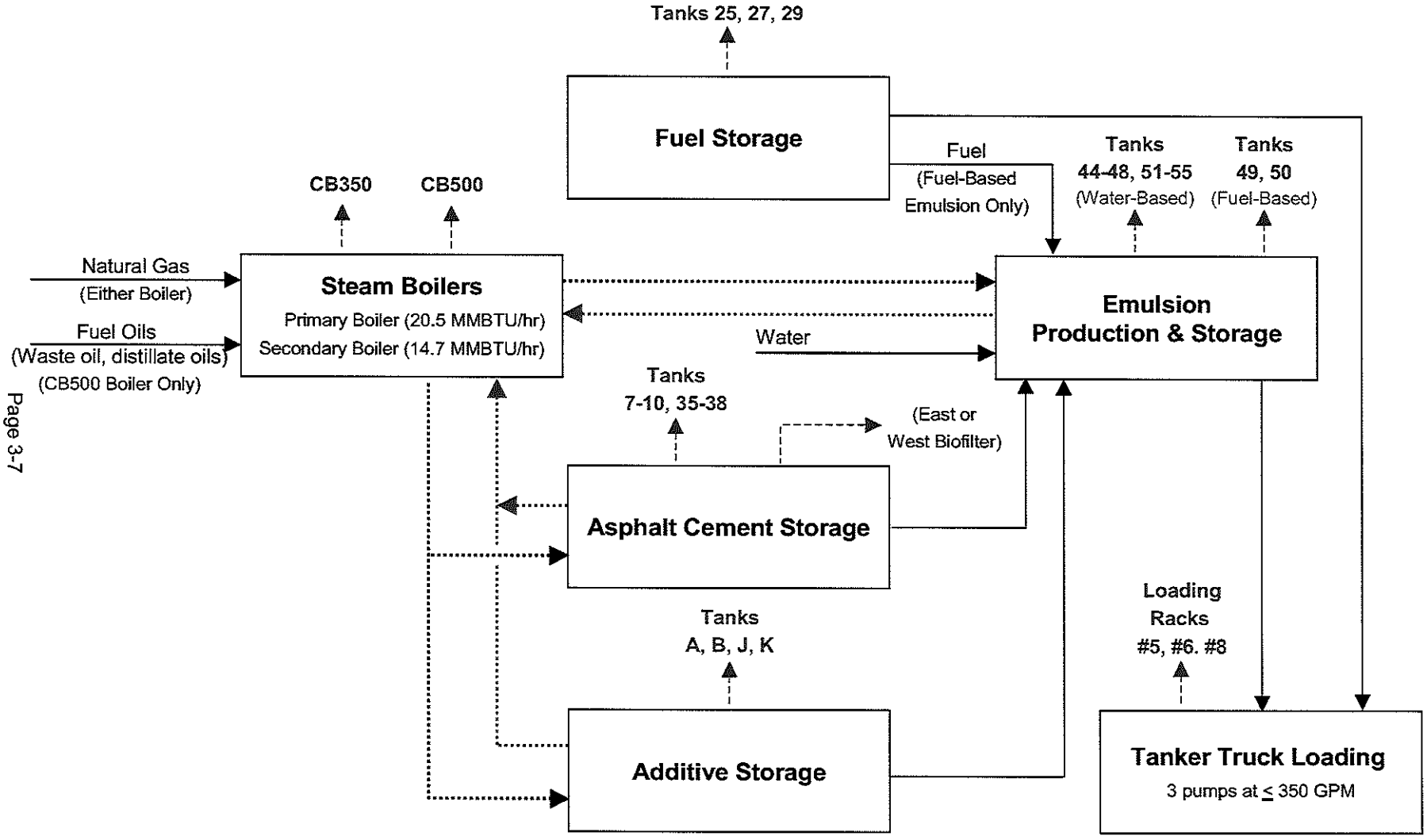
Heating Medium ·····

Heating Return ·····

Emission - - - - - -

Process Flow Diagram for Asphalt Emulsion Production, Storage and Loading

Idaho Asphalt Supply, Inc. – Blackfoot Facility



NOTES:

(1) This process flow diagram depicts typical asphalt emulsion production, storage and loading operations.

(2) Water is added during the production of all emulsions. Fuel is added during the production of fuel-based emulsions only.

(3) Tank 28 may be heated via steam generated by the Primary and Secondary Boilers.

(4) To facilitate flexibility, the plant maintains multiple loading racks that can be used to load asphalt cutback into tanker trucks.

KEY

Product, fuel, additive ——————

Heating Medium .....

Heating Return .....

Emission - - - - - - -

SECTION 4.0

EMISSION SOURCES

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility

4.0 EMISSION SOURCES

Emission sources at the IAS facility include fuel burning equipment, storage and handling of volatile compounds, loading racks, vehicle traffic on unpaved roads, and miscellaneous sources. The following is a discussion of each emission source at the facility.

4.1 Fuel Burning Equipment

Fuel burning equipment emission sources at the facility include two boilers (CB500 and CB350) and two hot oil heaters (Primary Hot Oil Heater CEI-5000G and Secondary Hot Oil Heater CEI-3000). This equipment is utilized to heat asphalt products to temperatures suitable for pumping and mixing. Table 4-1 below summarizes the characteristics of the fuel burning equipment operated at the facility.

Table 4-1
Fuel Burning Equipment Characteristics

Unit ID	Manufacturer	Model	Heat Input (BTU/hr)	Fuel
CB500	Cleaver Brooks	CB500	20.5×10^6	Natural Gas/ Waste Oil/Fuel Oil No. 4, 5, & 6
CB350	Cleaver Brooks	CB350	14.65×10^6	Natural Gas
Primary Hot Oil Heater (CEI-5000G)	CEI Enterprises	CEI-5000G	7.3×10^6	Natural Gas
Secondary Hot Oil Heater (CEI-3000)	CEI Enterprises	CEI-3000	4.32×10^6	Natural Gas

All fuel burning equipment at the facility except the CB500 boiler is exempt from requirements for a PTC (IDAPA 58.01.01.222.02(c)) because this equipment is used for indirect heating by combusting only natural gas and with heat input capacity less that 50 million BTU/hour. A PTC was issued for the CB500 boiler on April 15, 2001 because recycled waste oil may be combusted in this boiler as an alternative to natural gas combustion. In addition, IAS proposes to combust Fuel Oil No. 4, 5, and 6 in the CB500 boiler (this is a new proposed activity, see PTC application forms).

4.2 Storage and Handling of Volatile Compounds

There are 61 fixed roof vertical above ground storage tanks at the facility used for storing asphalt cements, PMA, asphalt emulsions, asphalt cutbacks, and a variety of product additives and fuels. All of the asphalt cement product tanks are heated to keep the material in a pumpable state. Table 4-2 below summarizes the characteristics of the storage tanks at the facility.

Table 4-2
Storage Tank Characteristics

Tank ID Number	General Tank Contents	Tank Diameter (ft)	Tank Height (ft)	Stack Height (ft)	Tank Capacity (gal)	Storage Temp. (°F)	Emission Point
Asphalt Cement and PMA							
4	PMA	30	40	46	211,493	380	West Biofilter
5	PMA	30	40	46	211,493	380	West Biofilter
6	PMA	30	40	46	211,493	380	West Biofilter
7	PMA	42	40	46	414,525	330	West Biofilter
8	Asphalt	42	40	46	414,525	330	West Biofilter
9	PMA	18	24	28	45,682	380	West Biofilter
10	Asphalt	42	40	46	414,525	330	West Biofilter
13	Asphalt	60	40	46	845,970	330	West Biofilter
14	Asphalt	60	40	46	845,970	330	West Biofilter
15	Asphalt	60	40	46	845,970	330	West Biofilter
16	Asphalt	52	40	46	635,418	330	West Biofilter
17	Asphalt	60	40	46	845,970	330	West Biofilter
18	Asphalt	52	40	46	635,418	330	West Biofilter
35	Asphalt	100	40	47	2,349,917	330	East Biofilter
36	Asphalt	75	50	57	1,652,285	330	East Biofilter
37	Asphalt	75	50	57	1,652,285	330	East Biofilter
38	Asphalt	100	40	47	2,349,917	330	East Biofilter
74	PMA	34.5	32	33	223,759	380	West Biofilter
75	PMA	34.5	32	33	223,759	380	West Biofilter
CT*	Process Tank	12	12	13	10,150	370	Vent
WT*	Process Tank	7	7	8	2,015	300	Vent
Asphalt Emulsions							
44	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
45	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
46	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
47	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
48	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
49	Asphalt Emulsion (fuel or water)	14	36	37	41,453	150	Vent
50	Asphalt Emulsion (fuel or water)	14	36	37	41,453	150	Vent
51	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
52	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
53	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
54	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
55	Asphalt Emulsion (water)	14	36	37	41,453	200	Vent
Asphalt Cutbacks							
2	Asphalt Cutback or Additive	14	36	37	41,453	150	Vent
22	Cutback	14	16	17	18,423	280	Vent
23	Cutback	14	16	17	18,423	280	Vent
26	Asphalt Cutback or Additive	12	32	33	27,071	150	Vent
28	Asphalt Cutback or Additive	12	32	33	27,071	150	Vent

Table 4-2
Storage Tank Characteristics (continued)

Tank ID Number	General Tank Contents	Tank Diameter (ft)	Tank Height (ft)	Stack Height (ft)	Tank Capacity (gal)	Storage Temp. (°F)	Emission Point
Additives/Fuels							
A	Fatty Acid Derived Amines	12	18	19	15,227	120	Vent
B	Ligninamine	12	18	19	15,227	120	Vent
G	Amines	12	18	19	15,227	120	Vent
J	Tall Oil	12	18	19	15,227	120	Vent
K	Hydrogenated Adiponitrile	12	18	19	15,227	120	Vent
3	Lube Oil	12	32	33	27,071	120	Vent
12	Cracked Heavy Oil Alkyl Amines	10	12	13	7,051	120	Vent
19	Cracked Heavy Oil Alkyl Amines	11	16	17	11,374	120	Vent
20	Cracked Heavy Oil Alkyl Amines	12	16	17	13,536	120	Vent
24	Catalytic Cracked Oil	12	32	33	27,071	100	Vent
25	#1 Diesel Fuel	12	21	22	17,765	Ambient	Vent
27	#1 Diesel Fuel	12	21	22	17,765	Ambient	Vent
29	Naphtha	12	21	22	17,765	Ambient	Vent
68	Cracked Heavy Oil Alkyl Amines	11	16	17	11,374	120	East Biofilter
69	Cracked Heavy Oil Alkyl Amines	11	16	17	11,374	120	Vent

(*) The CT and WT tanks are referred to as tanks 320-1 and 2320-1, respectively, in TANKS and air dispersion modeling.

Vapors from the asphalt cement storage tanks are routinely routed to two onsite biofilters (East Biofilter and West Biofilter) for odor control. The East and West Biofilters discharge to the atmosphere through vertical stacks approximately 26.25 and 45 feet above ground surface, respectively, with inside diameter of 4 inches. Vapors from storage tanks not routed through the biofilters are released to the atmosphere through a pressure relief valve installed at each tank.

The following storage tanks do not contain volatile compounds and are not included in this permit application as emission sources: C, D, F, H, I, S1, S2, and S3.

4.3 Loading Racks

There are seven primary loading racks used at the facility for transferring product to customer vehicles (see Figure 1-2 for locations of loading racks). In addition to the seven primary loading racks there are several unloading stations and a few dual purpose load/unload stations that are not considered to be significant sources of emissions. Unloading stations used to transfer product from delivery vehicles are not expected to generate significant emissions (beyond those already considered as breathing/working losses from storage tanks) and are not evaluated further in this permit application. Table 4-3 below provides a summary of loading rack characteristics.

Table 4-3
Loading Rack Characteristics

Loading Rack ID	Product Transferred	Transfer Method
#1	Asphalt Cement	1
#2	PMA	1
#3	Asphalt Cutback (MC)	2
#4	PMA	1
#5	Asphalt Emulsions	2
#6	Asphalt Emulsions	2
#8	Asphalt Emulsions	2

Notes:
Transfer Methods: (1) Overhead loading, splash fill (2) Overhead loading, submerged fill, normal service

4.4 Vehicle Traffic on Unpaved Roads

Vehicle traffic at the Blackfoot plant consists primarily of tanker trucks delivering asphalt cement and process additives to the site or picking up asphalt cement products for transport to the customer. Particulate emissions are generated when the truck wheels pulverize the surface material on the unpaved roads and the resulting particles become airborne in the vehicle's turbulent wake.

4.5 Miscellaneous Sources

In addition to the emission sources described above the following emissions sources are present at the facility. These sources are considered to produce negligible emissions or are exempt by rule.

4.5.1 Product-Quality Test Laboratory

The Blackfoot plant is equipped with an onsite laboratory that is used for product-quality testing, as well as research and development for potential new products. The laboratory is ventilated through several small stacks that terminate above the roofline of the building. Emission rates of regulated pollutants associated with the operation of the laboratory are considered negligible.

4.5.2 Asphalt Cement Reclaimer

IAS uses a reclaimer to heat and remove residual asphalt cement from buckets, tools or equipment at the Blackfoot plant. The reclaimed asphalt is subsequently transferred to the appropriate storage tank. Emissions associated with the reclaimer are considered negligible.

4.5.3 Unloading Stations

There are several unloading stations at the Blackfoot facility that are used to transfer asphalt cement products and process additives from delivery vehicles (railcars and tanker trucks) to the appropriate storage tanks. Emissions for the unloading stations, beyond those accounted for in the estimate of storage tank breathing and working losses, are considered negligible.

4.5.4 Shop and Boiler Room Natural Gas Space Heaters

Natural gas space heaters are located in the IAS shop and in the boiler room. The rated capacity for the space heater in the shop is 0.108 million Btu/hr and the rated capacity for the space heater in the boiler room is 0.125 million Btu/hr. Both heaters have heat input capacity significantly less than 50 million Btu/hr, the maximum heat input capacity allowed for exemption from permit to construct requirements for indirect heat sources. Natural gas is combusted in both of the heaters. Emissions from these two heaters are considered negligible.

4.5.5 Truck Fueling Operations

Diesel fuel is sold at the IAS facility for truck refueling. Fuel is stored and dispensed from tanker trucks at a dedicated onsite location. These activities are exempt from permit to construct requirements.

SECTION 5.0

EMISSION ESTIMATES

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility

5.0 EMISSION ESTIMATES

Emissions of criteria air pollutants and TAPs were estimated for all identified emission sources at the facility. Table 6-1 summarizes the estimated emissions of criteria pollutants and Table 6-2 summarizes the estimated emissions of TAPs. Based on the emission estimates presented in this permit application, the facility is not considered Major (IDAPA 58.01.01.006.55 and 008.10) for any criteria air pollutants or TAPs. The following section provides details regarding the emission estimation approach performed for each of the emission categories.

5.1 Fuel Burning Equipment

Emissions from the CB500 boiler were estimated using emission factors listed in AP-42 Chapter 1.3 for fuel oil combustion, Chapter 1.4 for natural gas combustion, and Chapter 1.11 for waste oil combustion. Emissions from the CB350 boiler and two hot oil heaters (CEI-5000G and CEI-3000) were estimated using emission factors listed in AP-42 Chapter 1.4. See Appendix A for detailed emission estimates and sample calculations for the fuel burning equipment. Tables 5-1 summarizes potential emission rates for the fuel burning equipment.

The estimated particulate emissions from all fuel burning equipment are below the applicable limits of the grain loading standard (IDAPA 58.01.01.676 and 677).

5.2 Storage and Handling of Volatile Compounds

Total volatile organic compound (VOC) emissions from 53 organic liquid storage tanks were estimated using TANKS 4.0 software. Complete TANKS 4.0 input and output documentation are presented in Appendix B1. Speciation of the TAPs compounds included in the total VOC emissions from the asphalt cement storage tanks were performed utilizing Tables 11.1-15 and 16 from Chapter 11.1 of AP-42 for asphalt cement emissions. Available speciation information listed in MSDS forms and/or vendor supplied documentation were utilized to estimate TAPs emissions from tanks with contents other than asphalt cement (see Appendix B2 for product speciation documentation and Appendix B3 for speciated emissions from storage tanks). See Table 5-1 for a summary of storage tank potential emission rates.

Tank throughput values were estimated by dividing the total maximum annual throughput for a particular product (e.g., asphalt cement or asphalt emulsions) by the number of tanks that store that product. This is considered a reasonable method for estimating emissions from the storage tanks but is not accurate regarding actual product throughput through each tank at the facility. Maximum product throughput through individual tanks for a particular group can be less or more than the average throughput evaluated in this screening analysis but this is a worst case scenario since maximum tank emissions occur when the throughput is evenly dispersed throughout multiple tanks as opposed to all of the product going through a single tank. Although product throughput values were used in this application to provide a method for estimating emission rates, IAS does not want product throughput limits to be

incorporated in their new permit; instead, IAS requests that limits on benzene emissions be established.

Vapors from the asphalt cement storage tanks are routinely routed to two onsite biofilters (East Biofilter and West Biofilter) for purposes of odor control. Emissions from the biofilters were estimated by summing the tank emissions that typically discharge to the respective biofilter. When considering the emissions from asphalt cement storage tanks and biofilters it must be noted that the emissions from the biofilters are not in addition to tank emissions (either the emissions from the storage tank or biofilter is considered but not both). It should also be noted that the biofilters are operated for odor control purposes and not to reduce emissions of criteria air pollutants or TAPs.

No criteria pollutants were estimated to be emitted from the storage tanks. Emissions of TAPs were below the emission screening levels (EL) for all storage tanks except Tanks 49 and 50 (these tanks exceed the EL for benzene). Although formaldehyde emission from each individual asphalt cement storage tanks is predicted to be less than the applicable EL, the estimated combined tank formaldehyde emissions through the west biofilter exceeds the EL.

5.3 Loading Racks

VOC emissions from product loading were estimated utilizing emission factors contained in AP-42 chapter 5.2. Speciation of VOC emissions was performed utilizing MSDS forms, vendor information, and product recipes. Appendix C contains loading rack emission estimates and sample calculations. Table 5-1 summarizes potential emission rates for the loading racks.

No criteria pollutants were estimated to be emitted from the loading racks. Emissions of TAPs were below the emission screening levels (EL) for all loading racks.

5.4 Vehicle Traffic on Unpaved Roads

Fugitive particulate emissions due to vehicle traffic on unpaved roads at the site were estimated using Equation 2 from AP-42, Section 13.2.2.2 with a correction factor for low vehicle speed. Inputs for the equation were obtained from AP-42, Tables 13.2.2-1 and 13.2.2-2. Particulate emissions were calculated for each product category (since each is loaded at a different loading rack, which results in a different travel distance). Appendix D contains fugitive road dust emission estimates.

5.5 Miscellaneous Emissions

Estimation of emissions from miscellaneous sources (laboratory, reclaimer, unloading racks, and truck fuel sales) was not performed due to the low probability of emissions generation from these sources.

Table 5-1
Summary of Potential to Emit

Emission Source	Criteria Air Pollutants (ton/yr)					TAPS (ton/yr)		
	PM10	VOC	NOx	SOx	CO	Arsenic	Benzene	Formal-dehyde
CB500	5.91	0.69	33.37	47.62	7.40	2.78E-03	1.85E-04	5.84E-04
CB350	0.49	0.01	0.06	0.04	5.39	1.28E-05	1.34E-04	1.38E-04
CEI-5000G	0.24	0.00	3.14	0.02	2.63	6.27E-06	6.58E-05	6.76E-05
CEI-3000	0.13	0.00	1.82	0.01	1.53	3.63E-06	3.81E-05	3.92E-05
Storage Tanks	NA	5.92	NA	NA	NA	NA	3.57E-02	1.73E-02
Loading Racks	NA	2.83	NA	NA	NA	NA	2.13E-03	NA
Total:	6.77	9.45	38.39	47.69	16.95	0.00	0.04	0.02

SECTION 6.0

AMBIENT IMPACT ASSESSMENT

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility

6.0 AMBIENT IMPACT ASSESSMENT

Air dispersion modeling was performed to demonstrate compliance with National Ambient Air Quality Standards (NAAQS) for criteria pollutants and IDEQ screening levels for TAPs in support of this combined PTC/Tier II Operating Permit application for the IAS facility.

6.1 Model Description / Justification

Air dispersion modeling was performed using the short term dispersion model Industrial Source Complex with Plume Rise Model Enhancement (ISC-PRIME) (version 99020). ISC-PRIME is an alternative EPA refined model listed in Appendix W of 40 CFR Ch. I, Part 51 – Guideline on Air Quality Models. On December 9, 2005 AERMOD replaced ISCST3 as the EPA preferred air dispersion model for refined modeling of industrial point sources. A one-year transition period has been established that allows for continued use of ISCST3 through November 9, 2006. ISC-PRIME was used for this permit application because a project model had already been developed with this model and because AERMOD required meteorological input files are not readily available for the project area. It is anticipated that the results from ISC-PRIME will be closer to AERMOD results than the non-PRIME version of ISCST3 because the PRIME algorithm is incorporated into AERMOD. Building downwash was accounted for in the ISC-PRIME model. Building and tank dimensions were entered into the Building Parameter Input Program for PRIME (BPIP-PRIME) to calculate appropriate building profiles to import into ISC-PRIME. Model output files are included in Appendix E and input files are included as electronic files on an enclosed compact disc.

6.2 Emission and Source Data

Thirty-four point sources were modeled, which included four combustion sources, four loading racks, 24 storage tanks, and two biofilters, Four criteria pollutants (PM-10, NOx, SOx, and CO) were modeled from the combustion sources. No criteria pollutants were predicted to be emitted from the storage tanks or loading racks and therefore were not modeled from these sources. The TAPs: arsenic (As), benzene, cadmium (Cd), formaldehyde, and nickel (Ni) were modeled from the combustion sources. The TAPs benzene and formaldehyde were modeled from the storage tank and loading rack sources.

Air dispersion modeling was performed considering maximum uncontrolled conditions for the CB350, CEI5000G, and CEI3000 combustion sources, asphalt cement storage tanks, and asphalt cement loading racks. Asphalt cutback and asphalt emulsion (with fuel) emissions were controlled based on limits applied to product benzene content. Emissions from the CB500 boiler were modeled as worst case considering combustion of a variety of fuels, the following operational controls were considered for CB500 fuel combustion:

- Natural Gas = unlimited operation
- Waste oil = 5,477 hours per year (to prevent exceedance of Arsenic AACC)
- Fuel Oils No. 4 through 6 = unlimited for No. 5 and 6, Fuel Oil No. 4 limited to 8,642 hours per year (to prevent exceedance of Nickel AACC).

Tables 6-1 and 6-2 summarize the emission source parameters included in the air dispersion modeling of criteria air pollutants and TAPs, respectively. These parameters include stack height in meters from ground surface, stack diameter, stack gas temperature, stack gas velocity, and air pollutant emission rates. Two scenarios were modeled for the ambient impact analysis for TAPs. The first scenario was a default configuration with emission rates from each tank based on total annual average product throughput. The second scenario included two tank groups: Asphalt Cutback Group with Tank 22 used as the proxy emission point and Asphalt Emulsion Group with Tank 50 used as the proxy emission point. Tanks 22 and 50 were used as proxy emission points for asphalt cutback and asphalt emulsion storage tank emissions, respectively, because the ambient impact was higher (worst-case) at these tanks than the contribution from the other storage tanks locations in the product storage group. For this second scenario all of the emissions from the storage tanks in each group were added together and modeled as emissions from the selected proxy emission point. Emissions from sources not in the two source groups were modeled as individual point sources. The second scenario was found to produce worst-case predicted ambient air concentrations and was therefore selected as the option for demonstrating compliance.

Table 6-1
Criteria Air Pollutant Emission Source Characteristics

Emission Source	Stack Height (m)	Stack Diam. (m)	Exhaust Temp. (K)	Stack Gas Velocity (m/s)	Emission Rates (g/s)			
					PM10	NOx	SOx	CO
Combustion Sources								
CB500	15.85	0.60	533.15	13.66	0.17	0.960	1.37	0.213
CB350	9.04	0.508	399.82	10.57	0.014	1.84E-3	1.10E-3	0.155
CEI-5000G	3.07	0.407	588.71	11.91	6.85E-3	9.02E-2	5.41E-4	7.57E-2
CEI-3000	4.47	0.305	544.26	11.34	3.87E-3	5.23E-2	3.14E-4	4.39E-2

Table 6-2
TAPs Emission Source Characteristics

Emission Source	Stack Height (m)	Stack Diam (m)	Exhaust Temp (K)	Stack Gas Velocity (m/s)	Emission Rates (g/s)				
					As	Cd	Ni	Ben-zene	Form-aldehyde
Combustion Sources									
CB500	15.85	0.60	533.15	13.66	8.0E-5	3.3E-5	1.47E-3	5.32E-6	5.94E-4
CB350	9.04	0.508	399.82	10.57	3.68E-7	2.02E-6	3.87E-6	3.87E-6	1.38E-4
CEI-5000G	3.07	0.407	588.71	11.91	1.8E-7	9.92E-7	1.89E-6	1.89E-6	6.76E-5
CEI-3000	4.47	0.305	544.26	11.34	1.05E-7	5.75E-7	1.10E-6	1.10E-6	3.92E-5
Asphalt Cement Storage Tanks									
West Biofilter	13.70	0.10	Ambient	0.00	NA	NA	NA	1.46E-5	3.15E-5
East Biofilter	8.00	0.10	Ambient	0.00	NA	NA	NA	2.57E-6	5.54E-5
Tank CT*	3.96	0.15	460.93	0.00	NA	NA	NA	6.96E-7	1.50E-5
Tank WT*	2.44	0.15	422.04	0.00	NA	NA	NA	2.20E-8	4.73E-7
Asphalt Emulsion Storage Tanks									
Tank 44	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 45	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 46	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 47	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 48	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 49	11.28	0.15	338.71	0.00	NA	NA	NA	3.83E-4	2.05E-5
Tank 50	11.28	0.15	338.71	0.00	NA	NA	NA	3.83E-4	2.05E-5
Tank 51	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 52	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 53	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 54	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Tank 55	11.28	0.15	366.48	0.00	NA	NA	NA	6.17E-9	1.33E-7
Asphalt Emulsion Group (Tank 50)	11.28	0.15	338.71	0.00	NA	NA	NA	7.66E-4	4.23E-5
Asphalt Cutback Storage Tanks									
Tank 2	11.28	0.15	338.71	0.00	NA	NA	NA	4.28E-5	2.06E-5
Tank 22	5.18	0.15	410.93	0.00	NA	NA	NA	5.58E-5	3.98E-6
Tank 23	5.18	0.15	410.93	0.00	NA	NA	NA	5.58E-5	3.98E-6
Tank 26	10.06	0.15	338.71	0.00	NA	NA	NA	3.46E-5	2.06E-5
Tank 28	10.06	0.15	338.71	0.00	NA	NA	NA	3.46E-5	2.06E-5
Asphalt Cutback Group (Tank 22)	5.18	0.15	410.93	0.00	NA	NA	NA	2.24E-4	6.97E-5
Additives/Fuels Storage Tanks									
Tank 3	10.06	0.15	322.04	0.00	NA	NA	NA	NA	NA
Tank 24	10.06	0.15	310.93	0.00	NA	NA	NA	NA	NA
Tank 25	6.71	0.15	ambient	0.00	NA	NA	NA	NA	NA
Tank 27	6.71	0.15	ambient	0.00	NA	NA	NA	NA	NA
Tank 29	6.71	0.15	ambient	0.00	NA	NA	NA	NA	NA
Loading Racks									
LR #3 (Cutback)	3.00	0.01	410.93	0.00	NA	NA	NA	2.84E-4	NA
LR #5 (Emulsion)	3.00	0.01	338.71	0.00	NA	NA	NA	8.90E-6	NA
LR #6 (Emulsion)	3.00	0.01	338.71	0.00	NA	NA	NA	8.90E-6	NA
LR #8 (Emulsion)	3.00	0.01	366.48	0.00	NA	NA	NA	7.62E-6	NA

(*) The CT and WT tanks are referred to as tanks 320-1 and 2320-1, respectively, in TANKS and air dispersion modeling.

6.3 Receptor Network

A receptor network was established so that ambient concentrations could be evaluated. The first step in this process was to determine the location of the ambient air boundary and the second step was to assign receptor locations within the ambient air zone.

6.3.1 Ambient Air Boundary

The ambient air boundary was established as the facility's fenceline. The fenceline extends around the entire facility's property boundary (see Figure 1-2 for location of fenceline).

6.3.2 Receptors

Receptors were established to determine maximum ambient air concentrations. A receptor grid with approximately 100 meter spacing was established across the entire evaluated area. Receptors along the ambient air boundary were spaced between 25 and 50 meters apart. Additional receptors were added as needed to determine the maximum model predicted ambient air concentration. No receptors were established within the facility's controlled property boundary (ambient air boundary).

6.4 Elevation Data

The facility was modeled assuming flat terrain. The change in elevation across the site, from east to west, is approximately four feet. The change in elevation, from south to north, is approximately 3 feet. All model predicted maximum air concentrations occur at or within 200 meters of the ambient air boundary. There are not any significant elevation changes to the north of the ambient air boundary where the maximum ambient air concentrations are predicted. Within a half mile of the site, the ground surface elevations do not exceed the stack discharge elevations. There are no terrain elevations that exceed the emission source elevations and terrain elevations are relatively flat in the areas of predicted maximum ambient air concentrations, so the terrain was modeled as flat with simple terrain.

6.5 Meteorological Data

Meteorological data was obtained from the EPA SCRAM website for 1987 through 1991, the current default time period selected by the IDEQ to represent the worse case five year meteorological period. Since there are no acceptable meteorological datasets available for Blackfoot, a combined dataset comprised of Boise upper air data and Pocatello near-surface air data was used per guidance from IDEQ. The datasets were formatted for use in ISC-PRIME using the EPA meteorological preprocessor PCRAMMET. The anemometer height for surface meteorological data was entered as 20 feet.

6.6 Land Use Classification

The land use of the site and land adjacent to the site is classified as rural. The facility is industrial while the surrounding land is a mix of open space, agricultural, commercial, and residential land uses.

6.7 Background Concentrations

Table 6-3 summarizes the criteria pollutant background concentrations. Criteria pollutant background concentrations for the Blackfoot area were provided by Kevin Schilling of the IDEQ.

6.8 Evaluation of Compliance With Standards

To determine compliance with NAAQS, the applicable background concentrations were added to the maximum predicted ambient concentrations determined from air dispersion modeling to result in total ambient concentrations. These total ambient air concentrations were compared to the NAAQS. Table 6-3 summarizes the air dispersion modeling results and compares the total predicted ambient air concentration to the applicable NAAQS. See Appendix E for graphical output from air dispersion modeling. Based on this evaluation, no NAAQS are predicted to be exceeded by emissions from the sources, if operated and configured as proposed in this application.

Table 6-3
Results of Ambient Impact Assessment for Criteria Pollutants
(All Concentrations in Units of $\mu g/m^3$)

Pollutant	Averaging Period	Meteorological Dataset					Compliance Demonstration			
		1987	1988	1989	1990	1991	Max	Background	Total	NAAQS
PM10	24 hr, 2nd high	5	5	5	5	4	5	73	78	150
	Annual	1	2	1	1	1	2	26	28	50
NOx	Annual	18	22	17	19	18	22	17	39	100
CO	1hr, 2nd high	117	117	116	117	117	117	3,600	3,717	40,000
	8hr, 2nd high	75	89	67	72	79	89	2,300	2,389	10,000
SOx	3hr, 2nd high	81	88	78	89	79	89	34	123	1300
	24hr, 2nd high	43	44	39	42	33	44	26	70	365
	Annual	4	4	3	3	4	4	8	12	80

6.9 Evaluation of Ambient Impact Assessment for TAPs

Table 6-4 summarizes the results of air dispersion modeling performed to evaluate the ambient impact for TAPs. Maximum predicted ambient air concentrations were compared to Acceptable Ambient Concentration for Carcinogens (AACC) in Table 6-4. No AACC were exceeded by predicted ambient air concentrations; therefore, the predicted ambient impact from predicted TAP emissions is acceptable.

Table 6-4
Results of Ambient Impact Assessment for Toxic Air Pollutants
(All Concentrations in Units of $\mu g/m^3$)

Pollutant	Averaging Period	Meteorological Dataset					Compliance	
		1987	1988	1989	1990	1991	Maximum	AACC
Arsenic	Annual	2.1E-04	2.3E-04	1.8E-04	2.0E-04	2.2E-04	2.3E-04	2.3E-04
Benzene	Annual	9.2E-02	1.1E-01	8.5E-02	9.1E-02	8.8E-02	1.1E-01	1.2E-01
Cadmium	Annual	2.0E-04	2.5E-04	1.9E-04	2.1E-04	2.0E-04	2.5E-04	5.6E-04
Formaldehyde	Annual	3.2E-02	3.5E-02	3.1E-02	3.2E-02	3.2E-02	3.5E-02	7.7E-02
Nickel	Annual	3.9E-03	4.2E-03	2.9E-03	3.6E-03	4.0E-03	4.2E-03	4.2E-03

SECTION 7.0

NSPS APPLICABILITY

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility

7.0 NSPS APPLICABILITY

New Source Performance Standards (NSPS) for volatile organic liquid storage tanks (Subpart Kb) and steam generating units (Subpart Dc) were evaluated for applicability to emission sources at the facility.

7.1 Storage Tanks

All storage tanks at the facility are exempt from requirements of NSPS Subpart Kb (see 40 CFR 60.110b(a) and (b)). Exemption is based on storage tank size and vapor pressure of stored liquids. See Appendix F for basis of exemption determination.

7.2 Boilers

The following NSPS requirements apply to the CB500 boiler:

§60.42c Standard for Sulfur Dioxide

(d) Since the boiler can combust oil, the facility must either demonstrate that SO_2 emissions are less than 0.50 lb/million Btu or only combust oil with sulfur content less than or equal to 0.5 weight percent.

(h) A facility that only combusts residual oils in a boiler with heat input capacity less than 30 million Btu/hr is allowed to demonstrate compliance with SO_2 emission limits based on fuel certification from fuel supplier.

§60.43c Standard for Particulate Matter

All boilers have heat input capacity less than 30 million Btu/hr; therefore, the standards for particulate matter do not apply.

§60.44c Compliance and performance test methods and procedures for sulfur dioxide

(h) Since the facility intends to demonstrate compliance with the SO_2 standard using fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f)(1), (2), or (3), as applicable.

§ 60.46c Emission monitoring for sulfur dioxide

(e) None of the monitoring requirements apply since the facility is using fuel supplier certification to demonstrate compliance.

§ 60.48c Reporting and recordkeeping requirements.

(a) This section applies to both the CB500 and CB350 boilers. The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part.

This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(d) A report must be submitted to the administrator since a fuel oil sulfur limit will apply to the CB500 boiler.

(e) Records must be maintained reports must be submitted since a fuel oil sulfur limit will apply to the CB500 boiler.

The following information must be provided:
(1) Calendar dates covered in the reporting period.
(2) Each 30-day average SO_2 emission rate (nj/J or lb/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.
(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.
(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.
(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), or (3) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:
(1) For distillate oil:
(i) The name of the oil supplier; and
(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c.
(2) For residual oil:
(i) The name of the oil supplier;
(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;
(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and
(iv) The method used to determine the sulfur content of the oil.

SECTION 8.0

REQUESTED PERMIT BASIS/CONDITIONS

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility

8.0 REQUESTED PERMIT BASIS/CONDITIONS

8.1 Natural Gas Combustion

Air dispersion modeling was performed considering maximum combustion of natural gas in each boiler and hot oil heater. Based on this ambient impact analysis no limitation on natural gas combustion is necessary to remain below NAAQS or TAPs limits; therefore, no natural gas limits appear to be necessary. If required, only a facility wide natural gas combustion limit of 403.1 million scf/yr should apply.

8.2 Fuel Oil Combustion

Emissions from the CB500 boiler were modeled as worst-case considering combustion of a variety of fuels. Based on worst-case air dispersion modeling, the proposed fuel oil use limits for the CB500 boiler are:

- Waste oil = 5,477 hours per year (to prevent exceedance of Arsenic AACC)
- Fuel Oils No. 4 through 6 = unlimited for No. 5 and 6, Fuel Oil No. 4 limited to 8,614 hours per year (to prevent exceedance of Nickel AACC).

8.3 Asphalt Cement Throughput

Emission estimates were computed assuming that annual asphalt cement throughput was equally split among storage tanks. This is a conservative assumption and results in worst-case emission estimates. Since equally splitting throughput among storage tanks is worst-case, flexibility in tank loading should be allowed. Only a total asphalt cement throughput limit (43.3 million gallons per year) should apply to the facility. Compliance with the annual facility wide asphalt cement throughput limit will be demonstrated based on incoming manifests and loading records.

8.4 Asphalt Cutback and Asphalt Emulsion Throughput

Air dispersion modeling was performed assuming all tank emissions from asphalt cutback storage were emitted from Tank 22 and all asphalt emulsion storage emissions were emitted from Tank 50. This was a worst-case assumption to allow flexibility in loading of the storage tanks in each of the product groups. IAS requests that throughput for the asphalt cutback and asphalt emulsion storage groups be limited based on total product benzene content for each group and not by total product throughput. IAS also requests that the benzene limits apply to the product groups instead of individual tanks. The proposed benzene throughput limits, based on worst-case air dispersion modeling are:

- Asphalt Cutback Storage Tank Group (Tanks 2, 23, 26, and 28): 159 lb/yr benzene
- Asphalt Cutback Loading Racks (LR 3): 51 lb/yr benzene
- Asphalt Emulsion Storage Tank Group (Tanks 44 though 55): 252 lb/yr benzene
- Asphalt Emulsion Loading Racks (LR 5, 6, and 8): 252 lb/yr benzene

APPENDIX A

FUEL BURNING EQUIPMENT EMISSION ESTIMATES AND SAMPLE CALCULATIONS

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility

SAMPLE CALCULATIONS – FUEL BURNING EQUIPMENT

The following sample calculations are for the CB500 boiler (combustion of natural gas). Calculations were performed identically for combustion of other fuel oils and for the other emission sources (CB350 boiler, Primary Hot Oil Heater CEI-5000G, and Secondary Hot Oil Heater CEI-3000).

1.) Air Pollutant Emissions (CB500 boiler)

Data:

Emission Factor = 7.6 lb $PM_{10}/10^6$ scf *(AP-42, Table 1.4-2)*
Input Heat Capacity = 20.5 x 10^6 BTU/hr *(CB500 boiler)*
Natural Gas Heating Value = 1,020 BTU/scf *(AP-42, Section 1.4)*

Calculations:

Max Hourly Fuel consumption = (20.5 x 10^6 BTU/hr) / (1,020 BTU/scf) = 20,098 scf/hr
PM_{10} Hourly Emission Rate = (20,098 scf/hr) x (7.6 lb $PM_{10}/10^6$ scf)
PM_{10} Hourly Emission Rate = 0.153 lb/hr

Emission rates for all criteria pollutant and TAPs were calculated in the same manner as PM_{10} using the appropriate emission factors.

2.) Grain Loading Standard Compliance

Data:

F_d = 0.00871 dscf stack gas/BTU *(40 CFR 60, App. A, Method 19, Table 19-1)*
Input Heat Capacity = 20,500,000 BTU/hr *(CB500 boiler)*
Standard Pressure = (P_s) = 760 mm Hg

Calculations:

Blackfoot Barometric Pressure = (P_B) = (29.92 - (0.001 x Blackfoot Elevation)) x 25.4 mm/inch)
P_B = (29.92 - (0.001 x 4,504 ft)) x 25.4 mm/inch = 645.57 mm Hg
Dry Standard Flow Rate = Q_{ds} = (F_d) x (Boiler Input Heat Capacity)
Q_{ds} = (F_d) x (Boiler Input Heat Capacity)

$$Q_{ds} = \frac{(0.00871 \text{ dscf/BTU}) \times (20{,}500{,}000 \text{ BTU/hr})}{(60 \text{ min/hr})} = 2{,}976 \text{ dscfm}$$

Corrected Dry Standard Flow Rate for Altitude and 3% Oxygen = Q_{dsc}
$Q_{dsc} = Q_{ds} \times 20.9 \times P_s / [(20.9 - \% O_2) \times P_B]$
Q_{dsc} = (2,976 dscfm x 20.9 x 760 mm Hg) / [(20.9 - 3) x 645.57 mm Hg]
Q_{dsc} = 4,091 dscfm

$$\text{Total } PM_{10} \text{ Emission Rate} = \frac{(0.153 \text{ lb/hr}) \times (7000 \text{ gr/lb})}{(4{,}091 \text{ dscfm}) \times (60 \text{ min/hr})}$$

PM_{10} Emission Rate = 0.004 gr/dscf
0.004 gr/dscf < 0.015 gr/dscf ➡ Meets Grain Loading Standard

Combustion Source Characteristics	
Combustion Unit ID	CB500 Boiler
Manufacturer	Cleaver Brooks
Model	**CB500**
Input Heat Capacity (BTU/hr)	20,500,000
Stack Height (ft)	52.00
Stack Height (m)	15.85
Stack Diameter (ft)	1.96
Stack Diameter (m)	0.60
Exit Gas Temperature (°F)	500
Exit Gas Temperature (K)	533.15
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	Natural Gas
Heating Value (BTU/scf)	1,020
Product Consumption (scf/hr)	20,098
Wet Standard Stack Flow Rate (wscf/min)	3,625
Dry Standard Stack Flow Rate (dscf/min)	2,976
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	4,091
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	8,330
Stack Velocity (m/s)	14.04
Actual Hours of Operation (hr/yr)	8,760

Criteria Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10 (assume = PM)	7.6	1.53E-01	6.69E-01	1.92E-02	15	yes	no
SO2	0.6	1.21E-02	5.28E-02	1.52E-03	40	yes	no
NOx	100	2.01E+00	8.80E+00	2.53E-01	40	no	no
CO	84	1.69E+00	7.39E+00	2.13E-01	100	yes	no
VOC	5.5	1.11E-01	4.84E-01	1.39E-02	40	yes	no
Lead	0.0005	1.00E-05	4.40E-05	1.27E-06	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	7.6	1.53E-01	6.69E-01	1.92E-02	25	yes	no
Beryllium	<1.2E-5	ND	ND	ND	0.0004	yes	no
Mercury	2.60E-04	5.23E-06	2.29E-05	6.58E-07	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
Natural Gas	17.82	0.004	0.015	yes

Other Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
TOC	11	2.21E-01	9.68E-01	2.79E-02
HCl	NA	NA	NA	NA
Methane	2.3	4.62E-02	2.02E-01	5.82E-03
CO_2	120,000	2,412	10,564	304
N_2O	2.2	4.42E-02	1.94E-01	5.57E-03

Toxic Air Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	2.00E-04	4.02E-06	1.76E-05	5.06E-07	1.50E-06	yes	no
Barium	4.40E-03	8.84E-05	3.87E-04	1.11E-05	0.033	no	yes
Benzene	2.10E-03	4.22E-05	1.85E-04	5.32E-06	8.00E-04	no	yes
Beryllium	<1.2E-5	ND	ND	ND	2.80E-05	no	yes
Benzo(a)pyrene	<1.2E-6	ND	ND	ND	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	NA	2.80E-02	no	yes
Cadmium	1.10E-03	2.21E-05	9.68E-05	2.79E-06	3.70E-06	yes	no
Chromium	1.40E-03	2.81E-05	1.23E-04	3.55E-06	3.30E-02	no	yes
Cobalt	8.40E-05	1.69E-06	7.39E-06	2.13E-07	3.30E-03	no	yes
Copper	8.50E-04	1.71E-05	7.48E-05	2.15E-06	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	NA	6.70E-02	no	yes
Dichlorobenzene	1.20E-03	2.41E-05	1.06E-04	3.04E-06	2.00E+01	no	yes
Ethylbenzene	NA	NA	NA	NA	2.90E+01	no	yes
Fluorene	2.80E-06	5.63E-08	2.46E-07	7.09E-09	1.33E-01	no	yes
Formaldehyde	7.50E-02	1.51E-03	6.60E-03	1.90E-04	5.10E-04	yes	no
Hexane	1.80E+00	3.62E-02	1.58E-01	4.56E-03	1.20E+01	no	yes
Manganese	3.80E-04	7.64E-06	3.35E-05	9.62E-07	3.33E-01	no	yes
Mercury	2.60E-04	5.23E-06	2.29E-05	6.58E-07	3.00E-03	no	yes
Molybdenum	1.10E-03	2.21E-05	9.68E-05	2.79E-06	3.33E-01	no	yes
Napthalene	6.10E-04	1.23E-05	5.37E-05	1.54E-06	3.33E+00	no	yes
Nickel	2.10E-03	4.22E-05	1.85E-04	5.32E-06	2.70E-05	yes	no
Pentane	2.60E+00	5.23E-02	2.29E-01	6.58E-03	1.18E+02	no	yes
Phenol	NA	NA	NA	NA	1.27E+00	no	yes
Selenium	<2.4E-5	ND	ND	ND	1.30E-02	no	yes
Toluene	3.40E-03	6.83E-05	2.99E-04	8.61E-06	2.50E+01	no	yes
Vanadium	2.30E-03	4.62E-05	2.02E-04	5.82E-06	3.00E-03	no	yes
o-Xylene	NA	NA	NA	NA	2.90E+01	no	yes
Zinc	2.90E-02	5.83E-04	2.55E-03	7.34E-05	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors for natural gas combustion are from AP-42 Chapter 1.4 "Natural Gas Combustion". For NOX and CO emission estimates, emission factors for an uncontrolled small boiler was selected.
(f) IDAPA 58.01.01.585 and 586

Combustion Source Characteristics	
Combustion Unit ID	CB500 Boiler
Manufacturer	Cleaver Brooks
Model	**CB500**
Input Heat Capacity (BTU/hr)	20,500,000
Stack Height (ft)	52.00
Stack Height (m)	15.85
Stack Diameter (ft)	1.96
Stack Diameter (m)	0.60
Exit Gas Temperature (°F)	500
Exit Gas Temperature (K)	533.15
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	No. 6 Fuel
Heating Value (BTU/gal)	150,000
Product Consumption (gal/hr)	137
Wet Standard Stack Flow Rate (wscf/min)	3,625
Dry Standard Stack Flow Rate (dscf/min)	2,976
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	4,091
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	8,330
Stack Velocity (m/s)	14.04
Actual Hours of Operation (hr/yr)	8,760
(S) Sulfur Content (Wt%)	0.5
(A) Ash Content (Wt%)	0.93

Criteria Pollutants	EF[e] (lb/10^3 gal)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Significant Level [c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution? [c]
PM-10	5.17 A	6.57E-01	2.88E+00	8.28E-02	15	no	no
SO2	157 S	1.07E+01	4.70E+01	1.35E+00	40	no	yes
NOx	55	7.52E+00	3.29E+01	9.47E-01	40	no	no
CO	5	6.83E-01	2.99E+00	8.61E-02	100	yes	no
VOC			0.00E+00	0.00E+00	40	yes	no
Lead	1.51E-03	2.06E-04	9.04E-04	2.60E-05	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level [c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution? [c]
PM	9.19(S)+3.22 S	1.07E+00	4.68E+00	1.35E-01	25	yes	no
Beryllium	2.78E-05	3.80E-06	1.66E-05	4.79E-07	0.0004	yes	no
Mercury	1.13E-04	1.54E-05	6.76E-05	1.95E-06	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard [b] (gr/dscf)	Meets Standard?
No. 6 Fuel	124.59	0.030	0.050	yes

Other Pollutants	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
NMTOC	1.13	1.54E-01	6.76E-01	1.95E-02
HCl	0.357	4.88E-02	2.14E-01	6.14E-03
Methane	0.475	6.49E-02	2.84E-01	8.18E-03
CO_2	25,000	3,417	14,965	431

Toxic Air Pollutants	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	1.32E-03	1.80E-04	7.90E-04	2.27E-05	1.50E-06	yes	no
Barium	2.57E-03	3.51E-04	1.54E-03	4.43E-05	0.033	no	yes
Benzene	2.14E-04	2.92E-05	1.28E-04	3.69E-06	8.00E-04	no	yes
Beryllium	2.78E-05	3.80E-06	1.66E-05	4.79E-07	2.80E-05	no	no
Benzo(a)pyrene	NA	NA	NA	NA	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	NA	2.80E-02	no	yes
Cadmium	3.98E-04	5.44E-05	2.38E-04	6.85E-06	3.70E-06	yes	no
Chromium	8.45E-04	1.15E-04	5.06E-04	1.46E-05	3.30E-02	no	yes
Cobalt	6.02E-03	8.23E-04	3.60E-03	1.04E-04	3.30E-03	no	no
Copper	1.76E-03	2.41E-04	1.05E-03	3.03E-05	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	NA	6.70E-02	no	yes
Dichlorobenzene	NA	NA	NA	NA	2.00E+01	no	yes
Ethylbenzene	6.36E-05	8.69E-06	3.81E-05	1.10E-06	2.90E+01	no	yes
Fluorene	4.47E-06	6.11E-07	2.68E-06	7.70E-08	1.33E-01	no	yes
Formaldehyde	3.30E-02	4.51E-03	1.98E-02	5.68E-04	5.10E-04	yes	no
Hexane	NA	NA	NA	NA	1.20E+01	no	yes
Manganese	3.00E-03	4.10E-04	1.80E-03	5.17E-05	3.33E-01	no	yes
Mercury	1.13E-04	1.54E-05	6.76E-05	1.95E-06	3.00E-03	no	yes
Molybdenum	7.87E-04	1.08E-04	4.71E-04	1.36E-05	3.33E-01	no	yes
Napthalene	1.13E-03	1.54E-04	6.76E-04	1.95E-05	3.33E+00	no	yes
Nickel	8.45E-02	1.15E-02	5.06E-02	1.46E-03	2.70E-05	yes	no
Pentane	NA	NA	NA	NA	1.18E+02	no	yes
Phenol	NA	NA	NA	NA	1.27E+00	no	yes
Selenium	6.83E-04	9.33E-05	4.09E-04	1.18E-05	1.30E-02	no	yes
Toluene	6.20E-03	8.47E-04	3.71E-03	1.07E-04	2.50E+01	no	yes
Vanadium	3.18E-02	4.35E-03	1.90E-02	5.48E-04	3.00E-03	yes	no
o-Xylene	1.09E-04	1.49E-05	6.52E-05	1.88E-06	2.90E+01	no	yes
Zinc	2.91E-02	3.98E-03	1.74E-02	5.01E-04	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors (AP-42 Section 1.3 Fuel Oil Combustion):
- Table 1.3-1 (<100 MMBtu/hr) - SO_2, NO_x, CO, PM
- Table 1.3-3 (Commercial/institutional/residential combusters) - NMTOC, Methane
- Table 1.3-7 - PM10
- Table 1.3-11 - Metals
- Table 1.3-12 - CO_2

(f) IDAPA 58.01.01.585 and 586

Combustion Source Characteristics	
Combustion Unit ID	CB500 Boiler
Manufacturer	Cleaver Brooks
Model	**CB500**
Input Heat Capacity (BTU/hr)	20,500,000
Stack Height (ft)	52.00
Stack Height (m)	15.85
Stack Diameter (ft)	1.96
Stack Diameter (m)	0.60
Exit Gas Temperature (°F)	500
Exit Gas Temperature (K)	533.15
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	No. 5 Fuel
Heating Value (BTU/gal)	148,000
Product Consumption (gal/hr)	138.51
Wet Standard Stack Flow Rate (wscf/min)	3,625
Dry Standard Stack Flow Rate (dscf/min)	2,976
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	4,091
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	8,330
Stack Velocity (m/s)	14.04
Actual Hours of Operation (hr/yr)	8,760
(S) Sulfur Content (Wt%)	0.5
(A) Ash Content (Wt%)	0.93

Criteria Pollutants	EF[e] (lb/10^3 gal)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10	5.17 A	6.66E-01	2.92E+00	8.39E-02	15	no	no
SO2	157 S	1.09E+01	4.76E+01	1.37E+00	40	no	yes
NOx	55	7.62E+00	3.34E+01	9.60E-01	40	no	no
CO	5	6.93E-01	3.03E+00	8.73E-02	100	yes	no
VOC			0.00E+00	0.00E+00	40	yes	no
Lead	1.51E-03	2.09E-04	9.16E-04	2.64E-05	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	10	1.39E+00	6.07E+00	1.75E-01	25	no	no
Beryllium	2.78E-05	3.85E-06	1.69E-05	4.85E-07	0.0004	yes	no
Mercury	1.13E-04	1.57E-05	6.86E-05	1.97E-06	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
No. 5 Fuel	161.58	0.039	0.050	yes

Other Pollutants	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
NMTOC	1.13	1.57E-01	6.86E-01	1.97E-02
HCl	0.357	4.94E-02	2.16E-01	6.23E-03
Methane	0.475	6.58E-02	2.88E-01	8.29E-03
CO_2	25,000	3,463	15,167	436

Toxic Air Pollutants	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	1.32E-03	1.83E-04	8.01E-04	2.30E-05	1.50E-06	yes	no
Barium	2.57E-03	3.56E-04	1.56E-03	4.49E-05	0.033	no	yes
Benzene	2.14E-04	2.96E-05	1.30E-04	3.73E-06	8.00E-04	no	yes
Beryllium	2.78E-05	3.85E-06	1.69E-05	4.85E-07	2.80E-05	no	no
Benzo(a)pyrene	NA	NA	NA	NA	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	NA	2.80E-02	no	yes
Cadmium	3.98E-04	5.51E-05	2.41E-04	6.95E-06	3.70E-06	yes	no
Chromium	8.45E-04	1.17E-04	5.13E-04	1.47E-05	3.30E-02	no	yes
Cobalt	6.02E-03	8.34E-04	3.65E-03	1.05E-04	3.30E-03	no	no
Copper	1.76E-03	2.44E-04	1.07E-03	3.07E-05	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	NA	6.70E-02	no	yes
Dichlorobenzene	NA	NA	NA	NA	2.00E+01	no	yes
Ethylbenzene	6.36E-05	8.81E-06	3.86E-05	1.11E-06	2.90E+01	no	yes
Fluorene	4.47E-06	6.19E-07	2.71E-06	7.80E-08	1.33E-01	no	yes
Formaldehyde	3.30E-02	4.57E-03	2.00E-02	5.76E-04	5.10E-04	yes	no
Hexane	NA	NA	NA	NA	1.20E+01	no	yes
Manganese	3.00E-03	4.16E-04	1.82E-03	5.24E-05	3.33E-01	no	yes
Mercury	1.13E-04	1.57E-05	6.86E-05	1.97E-06	3.00E-03	no	yes
Molybdenum	7.87E-04	1.09E-04	4.77E-04	1.37E-05	3.33E-01	no	yes
Napthalene	1.13E-03	1.57E-04	6.86E-04	1.97E-05	3.33E+00	no	yes
Nickel	8.45E-02	1.17E-02	5.13E-02	1.47E-03	2.70E-05	yes	no
Pentane	NA	NA	NA	NA	1.18E+02	no	yes
Phenol	NA	NA	NA	NA	1.27E+00	no	yes
Selenium	6.83E-04	9.46E-05	4.14E-04	1.19E-05	1.30E-02	no	yes
Toluene	6.20E-03	8.59E-04	3.76E-03	1.08E-04	2.50E+01	no	yes
Vanadium	3.18E-02	4.40E-03	1.93E-02	5.55E-04	3.00E-03	yes	no
o-Xylene	1.09E-04	1.51E-05	6.61E-05	1.90E-06	2.90E+01	no	yes
Zinc	2.91E-02	4.03E-03	1.77E-02	5.08E-04	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors (AP-42 Section 1.3 Fuel Oil Combustion):
- Table 1.3-1 (<100 MMBtu/hr) - SO_2, NO_x, CO, PM
- Table 1.3-3 (Commercial/institutional/residential combusters) - NMTOC, Methane
- Table 1.3-7 - PM10
- Table 1.3-11 - Metals
- Table 1.3-12 - CO_2

(f) IDAPA 58.01.01.585 and 586

Combustion Source Characteristics	
Combustion Unit ID	CB500 Boiler
Manufacturer	Cleaver Brooks
Model	**CB500**
Input Heat Capacity (BTU/hr)	20,500,000
Stack Height (ft)	52.00
Stack Height (m)	15.85
Stack Diameter (ft)	1.96
Stack Diameter (m)	0.60
Exit Gas Temperature (°F)	500
Exit Gas Temperature (K)	533.15
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	No. 4 Fuel
Heating Value (BTU/gal)	146,000
Product Consumption (gal/hr)	140
Wet Standard Stack Flow Rate (wscf/min)	3,625
Dry Standard Stack Flow Rate (dscf/min)	2,976
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	4,091
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	8,330
Stack Velocity (m/s)	14.04
Actual Hours of Operation (hr/yr)	8,642
(S) Sulfur Content (Wt%)	0.5
(A) Ash Content (Wt%)	0.93

Criteria Pollutants	EF[e] (lb/10^3 gal)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10	5.17 A	6.75E-01	3.0	8.51E-02	15	no	no
SO2	150 S	1.05E+01	46.1	1.33E+00	40	no	yes
NOx	20	2.81E+00	12.3	3.54E-01	40	no	no
CO	5	7.02E-01	3.1	8.85E-02	100	yes	no
VOC			0.0	0.00E+00	40	yes	no
Lead	1.51E-03	2.12E-04	0.0	2.67E-05	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	7	9.83E-01	4.31E+00	1.24E-01	25	no	no
Beryllium	2.78E-05	3.90E-06	1.71E-05	4.92E-07	0.0004	yes	no
Mercury	1.13E-04	1.59E-05	6.95E-05	2.00E-06	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
No. 4 Fuel	114.65	0.028	0.050	yes

Other Pollutants	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
NMTOC	0.34	4.77E-02	2.09E-01	6.02E-03
HCl	0.357	5.01E-02	2.19E-01	6.31E-03
Methane	0.216	3.03E-02	1.33E-01	3.82E-03
CO_2	25,000	3,510	15,375	442

Toxic Air Pollutants	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	1.32E-03	1.85E-04	8.12E-04	2.34E-05	1.50E-06	yes	no
Barium	2.57E-03	3.61E-04	1.58E-03	4.55E-05	0.033	no	yes
Benzene	2.14E-04	3.00E-05	1.32E-04	3.79E-06	8.00E-04	no	yes
Beryllium	2.78E-05	3.90E-06	1.71E-05	4.92E-07	2.80E-05	no	no
Benzo(a)pyrene	NA	NA	NA	NA	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	NA	2.80E-02	no	yes
Cadmium	3.98E-04	5.59E-05	2.45E-04	7.04E-06	3.70E-06	yes	no
Chromium	8.45E-04	1.19E-04	5.20E-04	1.49E-05	3.30E-02	no	yes
Cobalt	6.02E-03	8.45E-04	3.70E-03	1.07E-04	3.30E-03	no	no
Copper	1.76E-03	2.47E-04	1.08E-03	3.11E-05	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	NA	6.70E-02	no	yes
Dichlorobenzene	NA	NA	NA	NA	2.00E+01	no	yes
Ethylbenzene	6.36E-05	8.93E-06	3.91E-05	1.13E-06	2.90E+01	no	yes
Fluorene	4.47E-06	6.28E-07	2.75E-06	7.91E-08	1.33E-01	no	yes
Formaldehyde	3.30E-02	4.63E-03	2.03E-02	5.84E-04	5.10E-04	yes	no
Hexane	NA	NA	NA	NA	1.20E+01	no	yes
Manganese	3.00E-03	4.21E-04	1.85E-03	5.31E-05	3.33E-01	no	yes
Mercury	1.13E-04	1.59E-05	6.95E-05	2.00E-06	3.00E-03	no	yes
Molybdenum	7.87E-04	1.11E-04	4.84E-04	1.39E-05	3.33E-01	no	yes
Napthalene	1.13E-03	1.59E-04	6.95E-04	2.00E-05	3.33E+00	no	yes
Nickel[g]	8.45E-02	1.19E-02	5.20E-02	1.47E-03	2.70E-05	yes	no
Pentane	NA	NA	NA	NA	1.18E+02	no	yes
Phenol	NA	NA	NA	NA	1.27E+00	no	yes
Selenium	6.83E-04	9.59E-05	4.20E-04	1.21E-05	1.30E-02	no	yes
Toluene	6.20E-03	8.71E-04	3.81E-03	1.10E-04	2.50E+01	no	yes
Vanadium	3.18E-02	4.47E-03	1.96E-02	5.63E-04	3.00E-03	yes	no
o-Xylene	1.09E-04	1.53E-05	6.70E-05	1.93E-06	2.90E+01	no	yes
Zinc	2.91E-02	4.09E-03	1.79E-02	5.15E-04	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors (AP-42 Section 1.3 Fuel Oil Combustion):
- Table 1.3-1 (<100 MMBtu/hr) - SO_2, NO_x, CO, PM
- Table 1.3-3 (Commercial/Institutional/residential combusters) - NMTOC, Methane
- Table 1.3-7 - PM10
- Table 1.3-11 - Metals
- Table 1.3-12 - CO_2

(f) IDAPA 58.01.01.585 and 586

Combustion Source Characteristics	
Combustion Unit ID	CB500 Boiler
Manufacturer	Cleaver Brooks
Model	**CB500**
Input Heat Capacity (BTU/hr)	20,500,000
Stack Height (ft)	52.00
Stack Height (m)	15.85
Stack Diameter (ft)	1.96
Stack Diameter (m)	0.60
Exit Gas Temperature (°F)	500
Exit Gas Temperature (K)	533.15
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	Fuel Oil Max
Heating Value (BTU/gal)	150,000
Product Consumption (gal/hr)	137
Wet Standard Stack Flow Rate (wscf/min)	3,625
Dry Standard Stack Flow Rate (dscf/min)	2,976
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	4,091
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	8,330
Stack Velocity (m/s)	14.04
Actual Hours of Operation (hr/yr)	8,642 (g)
(S) Sulfur Content (Wt%)	0.5
(A) Ash Content (Wt%)	0.93

Criteria Pollutants	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Significant Level [c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10	6.75E-01	3.0	8.51E-02	15	no	no
SO2	1.09E+01	47.6	1.37E+00	40	no	yes
NOx	7.62E+00	33.4	9.60E-01	40	no	no
CO	7.02E-01	3.1	8.85E-02	100	yes	no
VOC	0.00E+00	0.0	0.00E+00	40	yes	no
Lead	2.12E-04	0.0	2.67E-05	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level [c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	1.39E+00	6.07E+00	1.75E-01	25	no	no
Beryllium	3.90E-06	1.71E-05	4.92E-07	0.0004	yes	no
Mercury	1.59E-05	6.95E-05	2.00E-06	0.1	yes	no

PM Grain Loading Standard	Grain Load (gr/dscf @3% O2)	PM Grain Standard [b] (gr/dscf)	Meets Standard?
Fuel Oil Max	3.95E-02	0.050	yes

Other Pollutants	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
NMTOC	1.57E-01	6.86E-01	1.97E-02
HCl	5.01E-02	2.19E-01	6.31E-03
Methane	6.58E-02	2.88E-01	8.29E-03
CO_2	3.51E+03	15,375	442

Toxic Air Pollutants	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	1.85E-04	8.12E-04	2.34E-05	1.50E-06	yes	no
Barium	3.61E-04	1.58E-03	4.55E-05	0.033	no	yes
Benzene	3.00E-05	1.32E-04	3.79E-06	8.00E-04	no	yes
Beryllium	3.90E-06	1.71E-05	4.92E-07	2.80E-05	no	no
Benzo(a)pyrene	0.00E+00	NA	NA	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	0.00E+00	NA	NA	2.80E-02	no	yes
Cadmium	5.59E-05	2.45E-04	7.04E-06	3.70E-06	yes	no
Chromium	1.19E-04	5.20E-04	1.49E-05	3.30E-02	no	yes
Cobalt	8.45E-04	3.70E-03	1.07E-04	3.30E-03	no	no
Copper	2.47E-04	1.08E-03	3.11E-05	3.33E-01	no	yes
Dibutylphthalate	0.00E+00	NA	NA	6.70E-02	no	yes
Dichlorobenzene	0.00E+00	NA	NA	2.00E+01	no	yes
Ethylbenzene	8.93E-06	3.91E-05	1.13E-06	2.90E+01	no	yes
Fluorene	6.28E-07	2.75E-06	7.91E-08	1.33E-01	no	yes
Formaldehyde	4.63E-03	2.03E-02	5.84E-04	5.10E-04	yes	no
Hexane	0.00E+00	NA	NA	1.20E+01	no	yes
Manganese	4.21E-04	1.85E-03	5.31E-05	3.33E-01	no	yes
Mercury	1.59E-05	6.95E-05	2.00E-06	3.00E-03	no	yes
Molybdenum	1.11E-04	4.84E-04	1.39E-05	3.33E-01	no	yes
Napthalene	1.59E-04	6.95E-04	2.00E-05	3.33E+00	no	yes
Nickel	1.19E-02	5.20E-02	1.47E-03	2.70E-05	yes	no
Pentane	0.00E+00	NA	NA	1.18E+02	no	yes
Phenol	0.00E+00	NA	NA	1.27E+00	no	yes
Selenium	9.59E-05	4.20E-04	1.21E-05	1.30E-02	no	yes
Toluene	8.71E-04	3.81E-03	1.10E-04	2.50E+01	no	yes
Vanadium	4.47E-03	1.96E-02	5.63E-04	3.00E-03	yes	no
o-Xylene	1.53E-05	6.70E-05	1.93E-06	2.90E+01	no	yes
Zinc	4.09E-03	1.79E-02	5.15E-04	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors: Maximum from AP-42 Section 1.3 Fuel Oil Combustion for fuel oils No. 4 throgh 6
(f) IDAPA 58.01.01.585 and 586
(g) Limit on hours of operation only used for calculating As emission rate, all other emission rates assume unlimited hours of operation.
NA: Not Available

Combustion Source Characteristics	
Combustion Unit ID	CB500 Boiler
Manufacturer	Cleaver Brooks
Model	**CB500**
Input Heat Capacity (BTU/hr)	20,500,000
Stack Height (ft)	52.00
Stack Height (m)	15.85
Stack Diameter (ft)	1.96
Stack Diameter (m)	0.60
Exit Gas Temperature (°F)	500
Exit Gas Temperature (K)	533.15
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00
Wet Standard Stack Flow Rate (wscf/min)	3,625
Dry Standard Stack Flow Rate (dscf/min)	2,976
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	4,091
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	8,330
Stack Velocity (m/s)	14.04

Fuel Specific Characteristics	Waste Oil
Heating Value (BTU/gal)	150,000
Product Consumption (gal/hr)	137
Fuel Density (lb/gal)	7.41
Actual Hours of Operation (hr/yr)	8,760
(S) Sulfur Content (Wt%)	0.5
(A) Ash Content (Wt%)	0.2
(L) Lead Content (Wt%)	0.01
(C) Chlorine Content (Wt%)	0.67
Arsenic (ppm)	1
Cadmium (ppm)	0.4
Chromium (ppm)	0.3

Criteria Pollutants	EF[e] (lb/10^3 gal)		Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10	51	A	1.39E+00	6.1	1.76E-01	15	no	no
SO2	147	S	1.00E+01	44.0	1.27E+00	40	no	yes
NOx	19		2.60E+00	11.4	3.27E-01	40	no	no
CO	5		6.83E-01	3.0	8.61E-02	100	yes	no
VOC	1		1.37E-01	0.6	1.72E-02	40	yes	no
Lead	55	L	7.52E-02	0.3	9.47E-03	0.6	no	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^3 gal)		Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	64	A	1.75E+00	7.66E+00	2.20E-01	25	no	no
Beryllium	BDL		NA	NA	NA	0.0004	yes	no
Mercury	1.13E-04		1.54E-05	6.76E-05	1.95E-06	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
Waste Oil	204.06	0.0499	0.050	yes

Other Pollutants	EF[e] (lb/10^3 gal)		Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
TOC	1		1.37E-01	5.99E-01	1.72E-02
HCl	66	C	6.04E+00	2.65E+01	7.61E-01
Methane	0.47		6.42E-02	2.81E-01	8.09E-03
CO_2	22,000		3,007	13,169	379

Toxic Air Pollutants	EF[e] (lb/10^3 gal)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	7.41E-03	1.01E-03	4.44E-03	1.28E-04	1.50E-06	yes	no
Barium	4.40E-06	6.01E-07	2.63E-06	7.58E-08	0.033	no	yes
Benzene	2.14E-04	2.92E-05	1.28E-04	3.69E-06	8.00E-04	no	yes
Beryllium	ND	NA	NA	NA	2.80E-05	no	yes
Benzo(a)pyrene	ND	NA	NA	NA	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	ND	NA	NA	NA	2.80E-02	no	yes
Cadmium	2.96E-03	4.05E-04	1.77E-03	5.10E-05	3.70E-06	yes	no
Chromium	2.22E-03	3.04E-04	1.33E-03	3.83E-05	3.30E-02	no	yes
Cobalt	2.10E-04	2.87E-05	1.26E-04	3.62E-06	3.30E-03	no	yes
Copper	1.76E-03	2.41E-04	1.05E-03	3.03E-05	3.33E-01	no	yes
Dibutylphthalate	3.40E-05	4.65E-06	2.04E-05	5.85E-07	6.70E-02	no	yes
Dichlorobenzene	ND	NA	NA	NA	2.00E+01	no	yes
Ethylbenzene	6.36E-05	8.69E-06	3.81E-05	1.10E-06	2.90E+01	no	yes
Fluorene	4.47E-06	6.11E-07	2.68E-06	7.70E-08	1.33E-01	no	yes
Formaldehyde	3.03E-02	4.14E-03	1.81E-02	5.22E-04	5.10E-04	yes	no
Hexane	1.80E-03	2.46E-04	1.08E-03	3.10E-05	1.20E+01	no	yes
Manganese	6.80E-02	9.29E-03	4.07E-02	1.17E-03	3.33E-01	no	yes
Mercury	1.13E-04	1.54E-05	6.76E-05	1.95E-06	3.00E-03	no	yes
Molybdenum	1.10E-06	1.50E-07	6.58E-07	1.89E-08	3.33E-01	no	yes
Napthalene	9.20E-05	1.26E-05	5.51E-05	1.58E-06	3.33E+00	no	yes
Nickel	1.10E-02	1.50E-03	6.58E-03	1.89E-04	2.70E-05	yes	no
Pentane	2.60E-03	NA	NA	NA	1.18E+02	yes	no
Phenol	2.80E-05	NA	NA	NA	1.27E+00	yes	no
Selenium	BDL	NA	NA	NA	1.30E-02	no	yes
Toluene	6.20E-03	8.47E-04	3.71E-03	1.07E-04	2.50E+01	no	yes
Vanadium	2.30E-06	3.14E-07	1.38E-06	3.96E-08	3.00E-03	no	yes
o-Xylene	1.09E-04	1.49E-05	6.52E-05	1.88E-06	2.90E+01	no	yes
Zinc	2.91E-02	3.98E-03	1.74E-02	5.01E-04	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors (AP-42 Section 1.3 Fuel Oil Combustion):
- Table 1.3-1 (<100 MMBtu/hr) - SO_2, NO_x, CO, PM
(f) IDAPA 58.01.01.585 and 586

Combustion Source Characteristics	
Combustion Unit ID	CB500 Boiler
Manufacturer	Cleaver Brooks
Model	CB500
Input Heat Capacity (BTU/hr)	20,500,000
Stack Height (ft)	52.00
Stack Height (m)	15.85
Stack Diameter (ft)	1.96
Stack Diameter (m)	0.60
Exit Gas Temperature (°F)	500
Exit Gas Temperature (K)	533.15
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	Natural Gas	Waste Oil
Heating Value (BTU/scf)	1,020	1,122,000
Product Consumption (scf/hr)	20,098	18
Product Consumption (gal/hr)	150,333	136.67
Fuel Density (lb/gal)	NA	7.41
Wet Standard Stack Flow Rate (wscf/min)	3,625	3,526
Dry Standard Stack Flow Rate (dscf/min)	2,976	3,140
Dry Standard Flow Rate Corrected for 3% O_2 and Altitude (dscf/min)	4,091	4,316
Fd (dscf stack gas/BTU)	0.00871	0.00919
Fw (wscf stack gas/BTU)	0.01061	0.01032
Stack Flow	8,330	8,102
Stack Velocity (m/s)	14.04	13.66
Actual Hours of Operation (hr/yr)	3,283	5,477

Fuel Composition	Natural Gas	Waste Oil
% Ash	NA	0.2
% Sulfur	NA	0.5
% Lead	NA	0.01
% Chlorine	NA	0.67
Arsenic (ppm)	NA	1
Cadmium (ppm)	NA	0.4
Chromium (ppm)	NA	0.3

Criteria Pollutants	Natural Gas Combustion				Waste Oil Combustion				Maximum	Average				
	EF[f] (lb/10^6 scf)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	EF[e] (lb/10^3 gal)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Potential Emissions (ton/yr)	Limited Emissions (g/s)	Limited Emissions (ton/yr)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[g]	Significant Contribution?[c]
PM-10 (for NG assume = PM)	7.6	1.53E-01	6.69E-01	1.92E-02	51 A	1.39E+00	6.11E+00	1.76E-01	6.11	0.117	4.07	15	no	no
SO2	0.6	1.21E-02	5.28E-02	1.52E-03	147 S	1.00E+01	4.40E+01	1.27E+00	44.00	0.792	27.53	40	no	no
NOx	100	2.01E+00	8.80E+00	2.53E-01	19	2.60E+00	1.14E+01	3.27E-01	11.37	0.299	10.41	40	no	no
CO	84	1.69E+00	7.39E+00	2.13E-01	5	6.83E-01	2.99E+00	8.61E-02	7.39	0.134	4.64	100	yes	no
VOC (assumed equal to TOC for oil)	5.5	1.11E-01	4.84E-01	1.39E-02	1	1.37E-01	5.99E-01	1.72E-02	0.60	0.016	0.56	40	yes	no
Lead	0.0005	1.00E-05	4.40E-05	1.27E-06	55 L	7.52E-02	3.29E-01	9.47E-03	0.33	0.006	0.21	0.6	no	no

Non-Criteria Pollutants with Significant Threshold	Natural Gas Combustion				Waste Oil Combustion				Maximum	Average				
	EF[f] (lb/10^6 scf)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	EF[e] (lb/10^3 gal)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Potential Emissions (ton/yr)	Limited Emissions (g/s)	Limited Emissions (ton/yr)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[g]	Significant Contribution?[c]
PM	7.6	1.53E-01	6.69E-01	1.92E-02	64 A	1.75E+00	7.66E+00	2.20E-01	7.66	0.145	5.04	25	no	no
Beryllium	<1.2E-5	ND	ND	ND	BDL	ND	ND	ND	ND	ND	ND	0.0004	yes	no
Mercury	2.60E-04	5.23E-06	2.29E-05	6.58E-07	1.13E-04	1.54E-05	6.76E-05	1.95E-06	6.76E-05	1.463E-06	5.0868E-05	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
Natural Gas	17.82	0.004	0.015	yes
Waste Oil	204.06	0.0473	0.050	yes

Other Pollutants	Natural Gas Combustion				Waste Oil Combustion				Maximum	Average		
	EF[f] (lb/10^6 scf)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	EF[e] (lb/10^3 gal)	Potential Emissions (lb/hr)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Potential Emissions (ton/yr)	Limited Emissions (ton/yr)	Limited Emissions (g/s)	
TOC	11	2.21E-01	9.68E-01	2.79E-02	1	1.37E-01	5.99E-01	1.72E-02	9.68E-01	0.737	2.121E-02	
HCl	NA	NA	NA	NA	66 Cl	6.04	26.47	0.76	2.65E+01	1.65E+01	4.761E-01	
Methane	2.3	4.62E-02	2.02E-01	5.82E-03	0.47	6.42E-02	2.81E-01	8.09E-03	2.81E-01	0.252	7.243E-03	
CO_2	120,000	2,412	10,564	304	22,000	3,007	13,169	379	13,169	12,193	3.507E+02	
N_2O	2.2	4.42E-02	1.94E-01	5.57E-03	NA	NA	NA	NA	1.94E-01	7.26E-02	2.088E-03	

Toxic Air Pollutants	Natural Gas Combustion			Waste Oil Combustion			Maximum		Average				
	Ef[f] (lb/10^6 scf)	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Ef[e] (lb/10^3gal)	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Potential Emissions (ton/yr)	Potential Emissions (g/s)	Limited Emissions (lb/hr)	Limited Emissions (g/s)	EL[b] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic[d]	2.00E-04	4.02E-06	5.06E-07	7.41E-03	1.01E-03	1.28E-04	4.44E-03	1.28E-04	6.35E-04	8.00E-05	1.50E-06	yes	no
Barium	4.40E-03	8.84E-05	1.11E-05	4.40E-06	6.01E-07	7.58E-08	3.87E-04	1.11E-05	3.35E-05	4.22E-06	0.033	no	yes
Benzene	2.10E-03	4.22E-05	5.32E-06	2.14E-04	2.92E-05	3.69E-06	1.85E-04	5.32E-06	3.41E-05	4.30E-06	8.00E-04	no	yes
Beryllium	<1.2E-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.80E-05	no	yes
Benzo(a)pyrene	<1.2E-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	2.80E-02	no	yes
Cadmium[d]	1.10E-03	2.21E-05	2.79E-06	2.96E-03	4.05E-04	5.10E-05	1.77E-03	5.10E-05	2.62E-04	3.30E-05	3.70E-06	yes	no
Chromium[d]	1.40E-03	2.81E-05	3.55E-06	2.22E-03	3.04E-04	3.83E-05	1.33E-03	3.83E-05	2.01E-04	2.53E-05	3.30E-02	no	yes
Cobalt	8.40E-05	1.69E-06	2.13E-07	2.10E-04	2.87E-05	3.62E-06	1.26E-04	3.62E-06	1.86E-05	2.34E-06	3.30E-03	no	yes
Copper	8.50E-04	1.71E-05	2.15E-06	1.76E-03	2.41E-04	3.03E-05	1.05E-03	3.03E-05	1.57E-04	1.98E-05	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	3.40E-05	4.65E-06	5.85E-07	2.04E-05	5.85E-07	2.90E-06	3.66E-07	6.70E-02	no	yes
Dichlorobenzene	1.20E-03	2.41E-05	3.04E-06	ND	ND	ND	1.06E-04	3.04E-06	9.04E-06	1.14E-06	2.00E+01	no	yes
Ethylbenzene	NA	NA	NA	6.36E-05	8.69E-06	1.10E-06	3.81E-05	1.10E-06	5.43E-06	6.84E-07	2.90E+01	no	yes
Fluorene	2.80E-06	5.63E-08	7.09E-09	4.47E-06	6.11E-07	7.70E-08	2.68E-06	7.70E-08	4.03E-07	5.08E-08	1.33E-01	no	yes
Formaldehyde	7.50E-02	1.51E-03	1.90E-04	3.03E-02	4.14E-03	5.22E-04	1.81E-02	5.22E-04	3.15E-03	3.97E-04	5.10E-04	yes	no
Hexane	1.80E+00	3.62E-02	4.56E-03	1.80E-03	2.46E-04	3.10E-05	1.58E-01	4.56E-03	1.37E-02	1.73E-03	1.20E+01	no	yes
Manganese	3.80E-04	7.64E-06	9.62E-07	6.80E-02	9.29E-03	1.17E-03	4.07E-02	1.17E-03	5.81E-03	7.32E-04	3.33E-01	no	yes
Mercury	2.60E-04	5.23E-06	6.58E-07	1.13E-04	1.54E-05	1.95E-06	6.76E-05	1.95E-06	1.16E-05	1.46E-06	3.00E-03	no	yes
Molybdenum	1.10E-03	2.21E-05	2.79E-06	1.10E-06	1.50E-07	1.89E-08	9.68E-05	2.79E-06	8.38E-06	1.06E-06	3.33E-01	no	yes
Napthalene	6.10E-04	1.23E-05	1.54E-06	9.20E-05	1.26E-05	1.58E-06	5.51E-05	1.58E-06	1.25E-05	1.57E-06	3.33E+00	no	yes
Nickel	2.10E-03	4.22E-05	5.32E-06	1.10E-02	1.50E-03	1.89E-04	6.58E-03	1.89E-04	9.56E-04	1.20E-04	2.70E-05	yes	no
Pentane	2.60E+00	5.23E-02	6.58E-03	2.60E-03	3.55E-04	4.48E-05	2.29E-01	6.58E-03	1.98E-02	2.50E-03	1.18E+02	no	yes
Phenol	NA	NA	NA	2.80E-05	3.83E-06	4.82E-07	1.68E-05	4.82E-07	2.39E-06	3.01E-07	1.27E+00	no	yes
Selenium	<2.4E-5	ND	ND	BDL	ND	ND	ND	ND	ND	ND	1.30E-02	no	yes
Toluene	3.40E-03	6.83E-05	8.61E-06	6.20E-03	8.47E-04	1.07E-04	3.71E-03	1.07E-04	5.55E-04	7.00E-05	2.50E+01	no	yes
Vanadium	2.30E-03	4.62E-05	5.82E-06	2.30E-06	3.14E-07	3.96E-08	2.02E-04	5.82E-06	1.75E-05	2.21E-06	3.00E-03	no	yes
o-Xylene	NA	NA	NA	1.09E-04	1.49E-05	1.88E-06	6.52E-05	1.88E-06	9.30E-06	1.17E-06	2.90E+01	no	yes
Zinc	2.90E-02	5.83E-04	7.34E-05	2.91E-02	3.98E-03	5.01E-04	1.74E-02	5.01E-04	2.70E-03	3.41E-04	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.90
(d) The Emission Factors for waste oil combustion were estimated for arsenic, chromium, and cadmium based on the assumption that 100% of the metal in the liquid would be present in the combustion off-gas.
(e) Emission Factors for waste oil combustion (unless otherwise noted) are from AP-42 Chapter 1.11 "Waste Oil Combustion". Emission Factors for small boilers were used when available, otherwise values for space heaters with atomizing burners were used.
(f) Emission Factors for natural gas combustion are from AP-42 Chapter 1.4 "Natural Gas Combustion". For NOX and CO emission estimates, emission factors for an uncontrolled small boiler were selected.
(g) IDAPA 58.01.01.221.01
(h) IDAPA 58.01.01.585 and 586

shaded cells represent values used by DEQ in calculations to support PTC 011-00023. Emission factors not listed in AP-42.

Combustion Source Characteristics	
Combustion Unit ID	CB350 Boiler
Manufacturer	Cleaver Brooks
Model	**CB350**
Input Heat Capacity (BTU/hr)	14,900,000
Stack Height (ft)	29.67
Stack Height (m)	9.04
Stack Diameter (ft)	1.67
Stack Diameter (m)	0.508
Exit Gas Temperature (°F)	260
Exit Gas Temperature (K)	399.82
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	Natural Gas
Heating Value (BTU/scf)	1,020
Product Consumption (scf/hr)	14,608
Wet Standard Stack Flow Rate (wscf/min)	2,635
Dry Standard Stack Flow Rate (dscf/min)	2,163
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	2,973
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	4,540
Stack Velocity (m/s)	10.57
Actual Hours of Operation (hr/yr)	8,760

Criteria Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10 (assume = PM)	7.6	1.11E-01	4.86E-01	1.40E-02	15	yes	no
SO2	0.6	8.76E-03	3.84E-02	1.10E-03	40	yes	no
NOx	100	1.46E+00	6.40E+00	1.84E-01	40	no	no
CO	84	1.23E+00	5.37E+00	1.55E-01	100	yes	no
VOC	5.5	8.03E-02	3.52E-01	1.01E-02	40	yes	no
Lead	0.0005	7.30E-06	3.20E-05	9.20E-07	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	7.6	1.11E-01	4.86E-01	1.40E-02	25	yes	no
Beryllium	<1.2E-5	ND	ND	ND	0.0004	yes	no
Mercury	2.60E-04	3.80E-06	1.66E-05	4.79E-07	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
Natural Gas	12.95	0.004	0.015	yes

Other Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
TOC	11	1.61E-01	7.04E-01	2.02E-02
HCl	NA	NA	NA	NA
Methane	2.3	3.36E-02	1.47E-01	4.23E-03
CO_2	120,000	1,753	7,678	221
N_2O	2.2	3.21E-02	1.41E-01	4.05E-03

Toxic Air Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	2.00E-04	2.92E-06	1.28E-05	3.68E-07	1.50E-06	yes	no
Barium	4.40E-03	6.43E-05	2.82E-04	8.10E-06	0.033	no	yes
Benzene	2.10E-03	3.07E-05	1.34E-04	3.87E-06	8.00E-04	no	yes
Beryllium	<1.2E-5	ND	ND	ND	2.80E-05	no	yes
Benzo(a)pyrene	<1.2E-6	ND	ND	ND	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	NA	2.80E-02	no	yes
Cadmium	1.10E-03	1.61E-05	7.04E-05	2.02E-06	3.70E-06	yes	no
Chromium	1.40E-03	2.05E-05	8.96E-05	2.58E-06	3.30E-02	no	yes
Cobalt	8.40E-05	1.23E-06	5.37E-06	1.55E-07	3.30E-03	no	yes
Copper	8.50E-04	1.24E-05	5.44E-05	1.56E-06	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	NA	6.70E-02	no	yes
Dichlorobenzene	1.20E-03	1.75E-05	7.68E-05	2.21E-06	2.00E+01	no	yes
Ethylbenzene	NA	NA	NA	NA	2.90E+01	no	yes
Fluorene	2.80E-06	4.09E-08	1.79E-07	5.15E-09	1.33E-01	no	yes
Formaldehyde	7.50E-02	1.10E-03	4.80E-03	1.38E-04	5.10E-04	yes	no
Hexane	1.80E+00	2.63E-02	1.15E-01	3.31E-03	1.20E+01	no	yes
Manganese	3.80E-04	5.55E-06	2.43E-05	6.99E-07	3.33E-01	no	yes
Mercury	2.60E-04	3.80E-06	1.66E-05	4.79E-07	3.00E-03	no	yes
Molybdenum	1.10E-03	1.61E-05	7.04E-05	2.02E-06	3.33E-01	no	yes
Napthalene	6.10E-04	8.91E-06	3.90E-05	1.12E-06	3.33E+00	no	yes
Nickel	2.10E-03	3.07E-05	1.34E-04	3.87E-06	2.70E-05	yes	no
Pentane	2.60E+00	3.80E-02	1.66E-01	4.79E-03	1.18E+02	no	yes
Phenol	NA	NA	NA	NA	1.27E+00	no	yes
Selenium	<2.4E-5	ND	ND	ND	1.30E-02	no	yes
Toluene	3.40E-03	4.97E-05	2.18E-04	6.26E-06	2.50E+01	no	yes
Vanadium	2.30E-03	3.36E-05	1.47E-04	4.23E-06	3.00E-03	no	yes
o-Xylene	NA	NA	NA	NA	2.90E+01	no	yes
Zinc	2.90E-02	4.24E-04	1.86E-03	5.34E-05	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors for natural gas combustion are from AP-42 Chapter 1.4 "Natural Gas Combustion". For NOX and CO emission estimates, emission factors for an uncontrolled small boiler was selected.
(f) IDAPA 58.01.01.585 and 586

Combustion Source Characteristics	
Combustion Unit ID	Primary Hot Oil Heater
Manufacturer	CEI Enterprises
Model	CEI-5000G
Input Heat Capacity (BTU/hr)	7,300,000
Stack Height (ft)	10.08
Stack Height (m)	3.07
Stack Diameter (ft)	1.33
Stack Diameter (m)	0.407
Exit Gas Temperature (°F)	600
Exit Gas Temperature (K)	588.71
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	Natural Gas
Heating Value (BTU/scf)	1,020
Product Consumption (scf/hr)	7,157
Wet Standard Stack Flow Rate (wscf/min)	1,291
Dry Standard Stack Flow Rate (dscf/min)	1,060
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	1,457
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	3,275
Stack Velocity (m/s)	11.91
Actual Hours of Operation (hr/yr)	8,760

Criteria Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10 (assume = PM)	7.6	5.44E-02	2.38E-01	6.85E-03	15	yes	no
SO2	0.6	4.29E-03	1.88E-02	5.41E-04	40	yes	no
NOx	100	7.16E-01	3.13E+00	9.02E-02	40	yes	no
CO	84	6.01E-01	2.63E+00	7.57E-02	100	yes	no
VOC	5.5	3.94E-02	1.72E-01	4.96E-03	40	yes	no
Lead	0.0005	3.58E-06	1.57E-05	4.51E-07	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	7.6	5.44E-02	2.38E-01	6.85E-03	25	yes	no
Beryllium	<1.2E-5	ND	ND	ND	0.0004	yes	no
Mercury	2.60E-04	1.86E-06	8.15E-06	2.34E-07	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
Natural Gas	6.34	0.004	0.015	yes

Other Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
TOC	11	7.87E-02	3.45E-01	9.92E-03
HCl	NA	NA	NA	NA
Methane	2.3	1.65E-02	7.21E-02	2.07E-03
CO_2	120,000	859	3,762	108
N_2O	2.2	1.57E-02	6.90E-02	1.98E-03

Toxic Air Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	2.00E-04	1.43E-06	6.27E-06	1.80E-07	1.50E-06	no	no
Barium	4.40E-03	3.15E-05	1.38E-04	3.97E-06	0.033	no	yes
Benzene	2.10E-03	1.50E-05	6.58E-05	1.89E-06	8.00E-04	no	yes
Beryllium	<1.2E-5	ND	ND	ND	2.80E-05	no	yes
Benzo(a)pyrene	<1.2E-6	ND	ND	ND	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	NA	2.80E-02	no	yes
Cadmium	1.10E-03	7.87E-06	3.45E-05	9.92E-07	3.70E-06	yes	no
Chromium	1.40E-03	1.00E-05	4.39E-05	1.26E-06	3.30E-02	no	yes
Cobalt	8.40E-05	6.01E-07	2.63E-06	7.57E-08	3.30E-03	no	yes
Copper	8.50E-04	6.08E-06	2.66E-05	7.67E-07	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	NA	6.70E-02	no	yes
Dichlorobenzene	1.20E-03	8.59E-06	3.76E-05	1.08E-06	2.00E+01	no	yes
Ethylbenzene	NA	NA	NA	NA	2.90E+01	no	yes
Fluorene	2.80E-06	2.00E-08	8.78E-08	2.52E-09	1.33E-01	no	yes
Formaldehyde	7.50E-02	5.37E-04	2.35E-03	6.76E-05	5.10E-04	yes	no
Hexane	1.80E+00	1.29E-02	5.64E-02	1.62E-03	1.20E+01	no	yes
Manganese	3.80E-04	2.72E-06	1.19E-05	3.43E-07	3.33E-01	no	yes
Mercury	2.60E-04	1.86E-06	8.15E-06	2.34E-07	3.00E-03	no	yes
Molybdenum	1.10E-03	7.87E-06	3.45E-05	9.92E-07	3.33E-01	no	yes
Napthalene	6.10E-04	4.37E-06	1.91E-05	5.50E-07	3.33E+00	no	yes
Nickel	2.10E-03	1.50E-05	6.58E-05	1.89E-06	2.70E-05	no	no
Pentane	2.60E+00	1.86E-02	8.15E-02	2.34E-03	1.18E+02	no	yes
Phenol	NA	NA	NA	NA	1.27E+00	no	yes
Selenium	<2.4E-5	ND	ND	ND	1.30E-02	no	yes
Toluene	3.40E-03	2.43E-05	1.07E-04	3.07E-06	2.50E+01	no	yes
Vanadium	2.30E-03	1.65E-05	7.21E-05	2.07E-06	3.00E-03	no	yes
o-Xylene	NA	NA	NA	NA	2.90E+01	no	yes
Zinc	2.90E-02	2.08E-04	9.09E-04	2.62E-05	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors for natural gas combustion are from AP-42 Chapter 1.4 "Natural Gas Combustion". For NOX and CO emission estimates, emission factors for an uncontrolled small boiler was selected.
(f) IDAPA 58.01.01.585 and 586

Combustion Source Characteristics	
Combustion Unit ID	Secondary Hot Oil Heater
Manufacturer	CEI Enterprises
Model	CEI-3000
Input Heat Capacity (BTU/hr)	4,230,000
Stack Height (ft)	14.67
Stack Height (m)	4.47
Stack Diameter (ft)	1.00
Stack Diameter (m)	0.305
Exit Gas Temperature (°F)	520
Exit Gas Temperature (K)	544.26
Standard Condition Temperature (K)	273.15
Blackfoot Barometric Pressure (mm Hg)	645.57
Standard Condition Barometric Pressure (mm Hg)	760.00

Fuel Specific Characteristics	Natural Gas
Heating Value (BTU/scf)	1,020
Product Consumption (scf/hr)	4147
Wet Standard Stack Flow Rate (wscf/min)	748
Dry Standard Stack Flow Rate (dscf/min)	614
DSCF Corrected for 3% O_2 and Altitude (dscf/min)	844
Fd (dscf stack gas/BTU)	0.00871
Fw (wscf stack gas/BTU)	0.01061
Wet Actual Stack Flow Rate (wacf/min)	1,755
Stack Velocity (m/s)	11.34
Actual Hours of Operation (hr/yr)	8760

Criteria Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM-10 (assume = PM)	7.6	3.15E-02	1.38E-01	3.97E-03	15	yes	no
SO2	0.6	2.49E-03	1.09E-02	3.14E-04	40	yes	no
NOx	100	4.15E-01	1.82E+00	5.23E-02	40	yes	no
CO	84	3.48E-01	1.53E+00	4.39E-02	100	yes	no
VOC	5.5	2.28E-02	9.99E-02	2.87E-03	40	yes	no
Lead	0.0005	2.07E-06	9.08E-06	2.61E-07	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	Significant Level[c] (ton/yr)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	7.6	3.15E-02	1.38E-01	3.97E-03	25	yes	no
Beryllium	<1.2E-5	ND	ND	ND	0.0004	yes	no
Mercury	2.60E-04	1.08E-06	4.72E-06	1.36E-07	0.1	yes	no

PM Grain Loading Standard	PM Emissions (gr/min)	Grain Load (gr/dscf @3% O2)	PM Grain Standard[b] (gr/dscf)	Meets Standard?
Natural Gas	3.68	0.004	0.015	yes

Other Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)
TOC	11	4.56E-02	2.00E-01	5.75E-03
HCl	NA	NA	NA	NA
Methane	2.3	9.54E-03	4.18E-02	1.20E-03
CO_2	120,000	498	2,180	63
N_2O	2.2	9.12E-03	4.00E-02	1.15E-03

Toxic Air Pollutants	EF[e] (lb/10^6 scf)	Emissions (lb/hr)	Emissions (ton/yr)	Emissions (g/s)	EL[f] (lb/hr)	Modeling Required?[a]	BRC?
Arsenic	2.00E-04	8.29E-07	3.63E-06	1.05E-07	1.50E-06	no	no
Barium	4.40E-03	1.82E-05	7.99E-05	2.30E-06	0.033	no	yes
Benzene	2.10E-03	8.71E-06	3.81E-05	1.10E-06	8.00E-04	no	yes
Beryllium	<1.2E-5	ND	ND	ND	2.80E-05	no	yes
Benzo(a)pyrene	<1.2E-6	ND	ND	ND	2.00E-06	no	yes
Bis (2-ethylhexyl)phthalate	NA	NA	NA	NA	2.80E-02	no	yes
Cadmium	1.10E-03	4.56E-06	2.00E-05	5.75E-07	3.70E-06	yes	no
Chromium	1.40E-03	5.81E-06	2.54E-05	7.32E-07	3.30E-02	no	yes
Cobalt	8.40E-05	3.48E-07	1.53E-06	4.39E-08	3.30E-03	no	yes
Copper	8.50E-04	3.53E-06	1.54E-05	4.44E-07	3.33E-01	no	yes
Dibutylphthalate	NA	NA	NA	NA	6.70E-02	no	yes
Dichlorobenzene	1.20E-03	4.98E-06	2.18E-05	6.27E-07	2.00E+01	no	yes
Ethylbenzene	NA	NA	NA	NA	2.90E+01	no	yes
Fluorene	2.80E-06	1.16E-08	5.09E-08	1.46E-09	1.33E-01	no	yes
Formaldehyde	7.50E-02	3.11E-04	1.36E-03	3.92E-05	5.10E-04	no	no
Hexane	1.80E+00	7.46E-03	3.27E-02	9.41E-04	1.20E+01	no	yes
Manganese	3.80E-04	1.58E-06	6.90E-06	1.99E-07	3.33E-01	no	yes
Mercury	2.60E-04	1.08E-06	4.72E-06	1.36E-07	3.00E-03	no	yes
Molybdenum	1.10E-03	4.56E-06	2.00E-05	5.75E-07	3.33E-01	no	yes
Napthalene	6.10E-04	2.53E-06	1.11E-05	3.19E-07	3.33E+00	no	yes
Nickel	2.10E-03	8.71E-06	3.81E-05	1.10E-06	2.70E-05	no	no
Pentane	2.60E+00	1.08E-02	4.72E-02	1.36E-03	1.18E+02	no	yes
Phenol	NA	NA	NA	NA	1.27E+00	no	yes
Selenium	<2.4E-5	ND	ND	ND	1.30E-02	no	yes
Toluene	3.40E-03	1.41E-05	6.18E-05	1.78E-06	2.50E+01	no	yes
Vanadium	2.30E-03	9.54E-06	4.18E-05	1.20E-06	3.00E-03	no	yes
o-Xylene	NA	NA	NA	NA	2.90E+01	no	yes
Zinc	2.90E-02	1.20E-04	5.27E-04	1.52E-05	6.67E-01	no	yes

Notes:
(a) IDAPA 58.01.01.210.05(b)
(b) IDAPA 58.01.01.676
(c) IDAPA 58.01.01.006.90
(d) IDAPA 58.01.01.221.01
(e) Emission Factors for natural gas combustion are from AP-42 Chapter 1.4 "Natural Gas Combustion". For NOX and CO emission estimates, emission factors for an uncontrolled small boiler was selected.
(f) IDAPA 58.01.01.585 and 586

APPENDIX B

STORAGE TANK EMISSIONS

Idaho Asphalt Supply, Inc.
Blackfoot, Idaho Facility